SONY

4-239-826-**12**(2)

Micro Hi-Fi Component System

Operating Instructions

Owner's Record

The model and serial numbers are located on the rear of the unit. Record the serial number in the space provided below. Refer to them whenever you call upon your Sony dealer regarding this product.

Model No. _____ Serial No. _____

DVD VIDEO

COMPACT disc DIGITAL VIDEO

COMPACT disc DIGITAL AUDIO TEXT

CMT-M90DVD

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WARNING

To prevent fire or shock hazard, do not expose the unit to rain or moisture.

To avoid electrical shock, do not open the cabinet. Refer servicing to qualified personnel only.

Do not install the appliance in a confined space, such as a bookcase or built-in cabinet.

This appliance is classified as a CLASS 1 LASER product. This label is located on the rear exterior.

CAUTION

The use of optical instruments with this product will increase eye hazard.
As the laser beam used in this CD/DVD player is harmful to eyes, do not attempt to disassemble the cabinet. Refer servicing to qualified personel only.

U.S.A. model

This label is located inside the unit.

European model

The following caution label is located inside the apparatus.

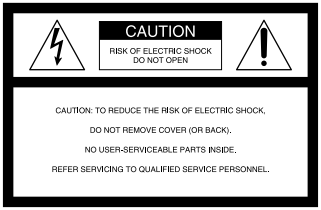
CAUTION : VISIBLE AND INVISIBLE LASER RADIATION WHEN OPEN. AVOID EXPOSURE TO BEAM.
ADVARSEL : SYNLIG OG USYNLIG LASERSTRÅLING VED ÅBNING. UNDGÅ UDSÆTTELSE FOR STRÅLING.
VORSICHT : SICHTBARE UND UNSICHTBARE LASERSTRAHLUNG WENN ABDECKUNG GEÖFFNET. NICHT DEM STRAHL AUSSETZEN.
VARO ! : NÄKYVÄÄ JA NÄKYMÄTÖN AVATTAESSA OLET ALTTIINA LASERSÄTEILYLLE. ÄLÄ KATSO SÄTEESEEN.
VARNING : SYNLIG OCH OSYNLIG LASERSTRÅLNING NÄR DENNA DEL ÄR ÖPPNAD. STRÅLEN ÄR FARLIG.
ADVARSEL : SYNLIG OG USYNLIG LASERSTRÅLING NÅR DEKSEL ÅPNES. UNNGÅ EKSPONERING FOR STRÅLEN.
FIGYELEM : A BURKOLAT MEGBONTÁSAKOR LÁTHATÓ ÉS LÁTHATATLAN LÉZERSUGÁR LÉPHET KI A KÉSZÜLÉKBÖL. ÓVAKODJON A KÖZVETLEN LÉZERSUGÁRTÓL!

To prevent fire, do not cover the ventilation of the apparatus with news papers, table-cloths, curtains, etc. And don't place lighted candles on the apparatus.

To prevent fire or shock hazard, do not place objects filled with liquids, such as vases, on the apparatus.

Don't throw away the battery with general house waste, dispose of it correctly as chemical waste.

NOTICE FOR THE CUSTOMERS IN THE U.S.A.


CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN
CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK,
DO NOT REMOVE COVER (OR BACK).
NO USER-SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

This symbol is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

WARNING

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

– Reorient or relocate the receiving antenna.
– Increase the separation between the equipment and receiver.
– Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
– Consult the dealer or an experienced radio/TV technician for help.

CAUTION

You are cautioned that any changes or modifications not expressly approved in this manual could void your authority to operate this equipment.

Note to CATV system installer

This reminder is provided to call the CATV system installer's attention to Article 820-40 of the NEC that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

NOTICE FOR THE CUSTOMERS IN CANADA

CAUTION:

TO PREVENT ELECTRIC SHOCK, DO NOT USE THIS POLARIZED AC PLUG WITH AN EXTENSION CORD, RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.

Except for European model

ENERGY STAR® is a U.S. registered mark.
As an ENERGY STAR® partner, Sony Corporation has determined that this product meets the ENERGY STAR® guidelines for energy efficiency.

This system incorporates Dolby* Digital, Pro Logic Surround, and the DTS** Digital Surround System.

* Manufactured under license from Dolby Laboratories.
"Dolby", "Pro Logic" and the double-D symbol are trademarks of Dolby Laboratories.

** Manufactured under license from Digital Theater Systems, Inc. "DTS" and "DTS Digital Surround" are registered trademarks of Digital Theater Systems, Inc.

Notes on DTS audio playback

- The DTS audio of the DVD is output only from the OPTICAL OUT jack, not from the speakers. To listen to the sound of DVD in other than DTS format, select "DOLBY DIGITAL" or other audio format (page 25).
- To enjoy DTS Digital Surround of DVD or CD, connect external 5.1 channel DTS Digital Surround Decoder to the OPTICAL OUT jack of this unit.
- When you playback the CD recorded in DTS format, excesive noise may be heard from the speakers. Set the volume to minumum and be careful not to damage your speaker system.

IMPORTANT NOTICE

Caution: This system is capable of holding a still video image or on-screen display image on your television screen indefinitely. If you leave the still video image or on-screen display image displayed on your TV for an extended period of time, you risk permanent damage to your television screen. Projection televisions are especially susceptible to this.

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* European model only.

This system can play the following discs

	DVD VIDEOs	Audio CDs	VIDEO CD
Disc logo	DVD VIDEO	COMPACT disc DIGITAL AUDIO TEXT	COMPACT disc DIGITAL VIDEO
Contents	Audio + Video	Audio	Audio + Video

The “DVD VIDEO” logo is a trademark.

Discs that this system cannot play

- CD-ROMs (PHOTO CDs included)
- All CD-Rs other than music and VCD format CD-Rs
- Data part of CD-Extras
- DVD-ROMs
- DVD Audio discs
- Super Audio CDs

Note

Some CD-Rs/CD-RWs or DVD-Rs/DVD-RWs cannot be played on this system depending upon the format or the recording quality or physical condition of the disc, or the characteristics of the recording device.
Furthermore, the disc will not play if it has not been correctly finalized. For more information, see the operating instructions for the recording device.

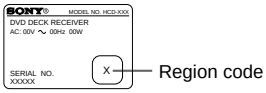
Region code of DVDs you can play on this system

Your system has a region code printed on the back of the unit and will only play DVDs labeled with identical region code.

DVDs labeled 🌐 will also be played on this system.

If you try to play any other DVD, the message “Playback prohibited by area limitations.” will appear on the TV screen.

Depending on the DVD, no region code indication may be labeled even though playing the DVD is prohibited by area restrictions.



Note on playback operations of DVDs and VIDEO CDs

Some playback operations of DVDs and VIDEO CDs may be intentionally set by software producers. Since this system plays DVDs and VIDEO CDs according to the disc contents the software producers designed, some playback features may not be available. Also, refer to the instructions supplied with the DVDs or VIDEO CDs.

Note on PBC (Playback Control) (VIDEO CDs)

This system conforms to Ver. 1.1 and Ver. 2.0 of VIDEO CD standards. You can enjoy two kinds of playback depending on the disc type.

Disc type	You can
VIDEO CDs without PBC functions (Ver. 1.1 discs)	Enjoy video playback (moving pictures) as well as music.
VIDEO CDs with PBC functions (Ver. 2.0 discs)	Play interactive software using menu screens displayed on the TV screen (PBC Playback), in addition to the video playback functions of Ver. 1.1 discs. Moreover, you can play high-resolution still pictures, if they are included on the disc.

Copyrights

This product incorporates copyright protection technology that is protected by method claims of certain U.S. patents, other intellectual property rights owned by Macrovision Corporation, and other rights owners. Use of this copyright protection technology must be authorized by Macrovision Corporation, and is intended for home and other limited viewing uses only unless otherwise authorized by Macrovision Corporation. Reverse engineering or disassembly is prohibited.

How to use this page

Use this page to find the location of buttons and other parts of the system that are mentioned in the text.

Illustration number
PLAY MODE 15 (9, 13, 14)
Name of button/part — Reference page

Main unit

ALPHABETICAL ORDER

A – F

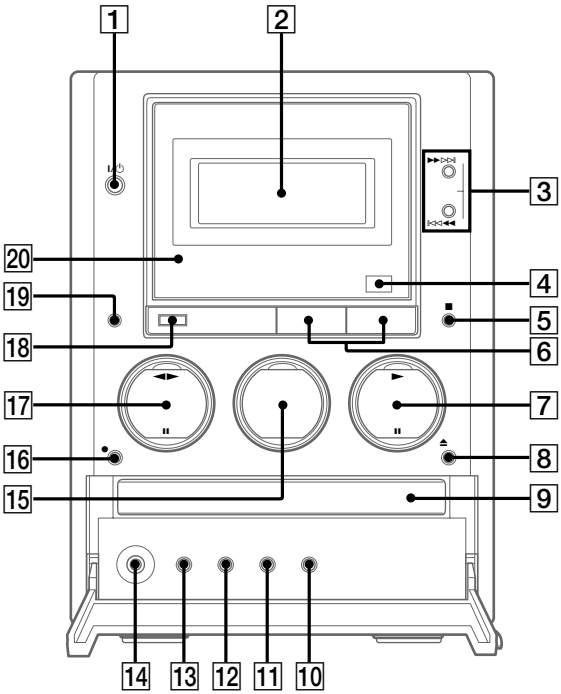
CD SYNCHRO 11 (37, 38)
CD SYNCHRO indicator 20 (38)
DIRECTION 10 (36–38)
Disc tray 9 (12)
Display window 2
DSG 18 (40)
DVD ► 7 (12–16, 18)
DVD ❚❚ 7 (13)
FUNCTION 19 (12, 14, 36–38, 46)

P – V

PHONES jack 14
PLAY MODE/TUNING MODE 13 (12, 14, 15, 33–35, 38)
Remote sensor 4
REPEAT/FM MODE 12 (17, 34, 35)
TAPE ◄► 17 (36, 37)
TAPE ❚❚ 17 (36–38)
TUNER AM 15 (33–35)
TUNER FM 15 (33–35)
TUNING +/– 3 (33–35)
VOLUME +/– 6

BUTTON DESCRIPTIONS

I/⏻ (power) 1
◄◄/►► 3
⏮/⏭ 3
■ 5
⏏ DVD 8
● REC 16



Remote Control

ALPHABETICAL ORDER

A – E

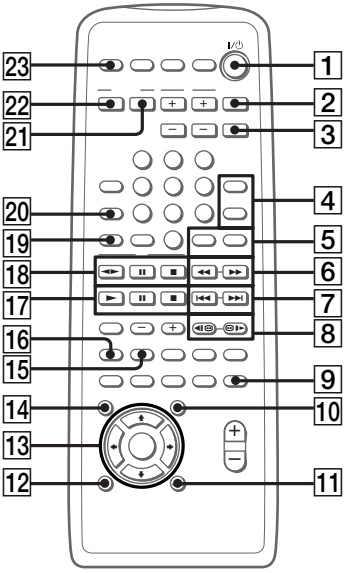
ANGLE 31 (28)
AUDIO 33 (25)
BASS/TREBLE 3 (40)
CLEAR 19 (14, 15, 17, 27)
CLOCK/TIMER SELECT 22 (39, 44)
CLOCK/TIMER SET 21 (11, 39, 44)
CURSOR ←/→ 5 (11)
DISPLAY 15 (23, 35, 42, 43)
DSG 2 (40)
DVD DISPLAY 12 (16, 17, 19, 20, 23–25, 27–31, 40)
DVD MENU 10 (17)
DVD TOP MENU 14 (17)
DVD SETUP 34 (19)
DVD ►/SELECT 17 (12–18, 21, 32)
DVD ❚❚ 17 (13)
DVD ■ 17 (13, 16, 18, 29)
DVD ⏮/⏭ 7 (13, 14, 18)
DVD ◀I⏪/⏩I▶ 8 (13)
ENTER/YES 20 (11, 14, 33, 39, 44)

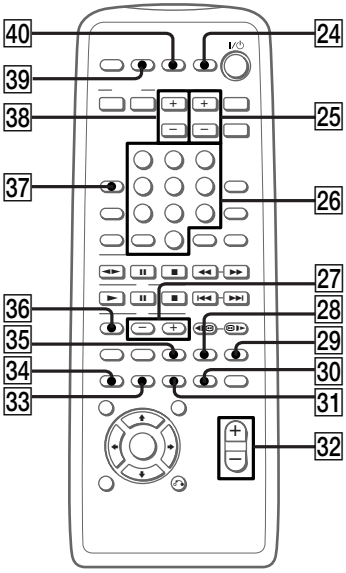
F – W

FUNCTION 16 (12, 14, 36–38, 46)
Numeric buttons 26 (13, 15, 17, 18, 20, 27–32, 34)
PLAY MODE/TUNING MODE 28 (12, 14, 15, 33–35, 38)
REPEAT/FM MODE 29 (13, 17, 35)
RETURN ⮌ 11 (18, 27, 30, 31)
SCROLL 35 (43)
SLEEP 23 (43)
SUBTITLE 30 (28)
TAPE ◀► 18 (36, 37)
TAPE ❚❚ 18 (36–38)
TAPE ■ 18 (36–38)
TAPE ◀◀/▶▶ 6 (36)
TUNER BAND 36 (33–35)
TUNER +/– 27 (33–35)
TUNING MEMORY 37 (33)
TV I/⏻ 24 (10)
TV CH +/– 25 (10)
TV VOL +/– 38 (10)
TV VIDEO 40 (10)
VES 9 (40)
VOL +/– 32
WIDE 39 (21)

BUTTON DESCRIPTIONS

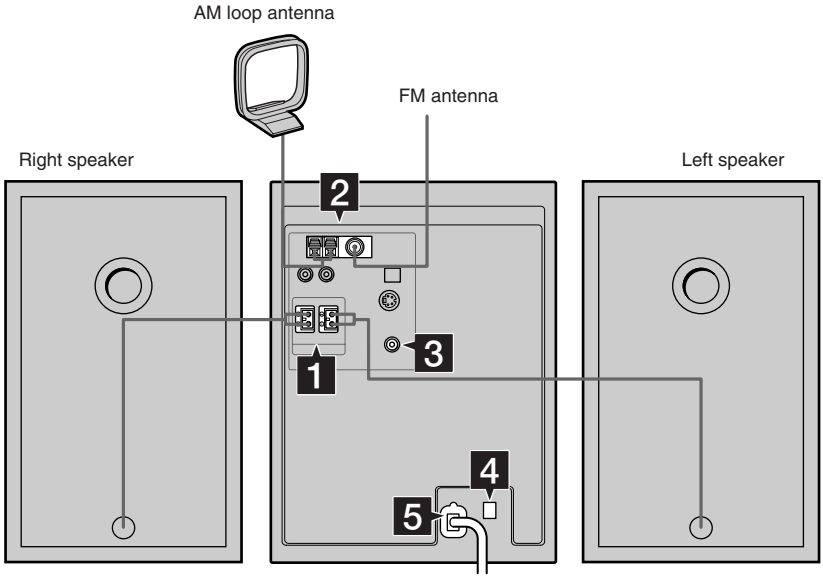
I/⏻ (power) 1
↑/↓/←/→/ENTER 13
+/– 4





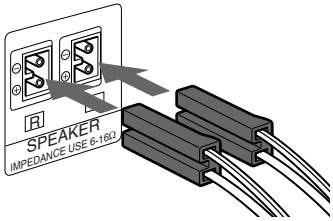
Hooking up the system

Perform the following procedure 1 to 5 to hook up your system using the supplied cords and accessories.



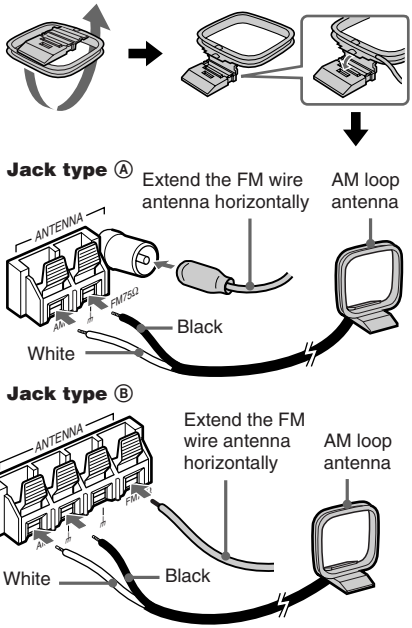
1 Connect the speakers.

Connect the right and left speaker cords to the SPEAKER terminals as shown below.



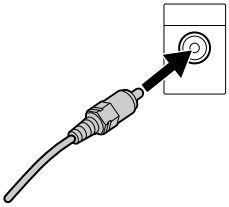
2 Connect the FM and AM antennas.

Set up the AM loop antenna, then connect it.



continued

3 Connect the video input jack of your TV to the VIDEO OUT jack with the video cable.



When using a TV

Turn on the TV and select the video input so you can view the pictures from this system.

Tip

For even higher quality video images, you can use an optional S-video cable to connect the S VIDEO input jack on your TV to the S VIDEO OUT jack.

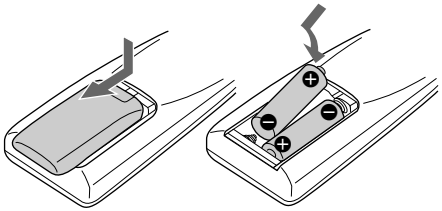
4 For models with a voltage selector, set VOLTAGE SELECTOR to the local power line voltage.

5 Connect the power cord to a wall outlet.

If the plug does not fit the wall socket, detach the supplied plug adaptor (only for models equipped with an adaptor).

To turn on the system, press I/⏻.

Inserting two size AA (R6) batteries into the remote



Operating a Sony TV

You can use the following buttons on the remote to operate a Sony TV.

To	Press
Turn the TV on or off	TV I/⏻.
Switch the TV's video input	TV/VIDEO.
Change the TV channels	TV CH +/–.
Adjusts the volume of the TV speaker(s)	TV VOL +/–.

Tip

When the remote no longer operates the system, replace both batteries with new ones.

Note

If you do not use the remote for a long period of time, remove the batteries to avoid possible damage from battery leakage and corrosion.

Setting the clock

1 Press I/⏻ to turn on the system.

2 Press CLOCK/TIMER SET on the remote.

3 Press + or – on the remote repeatedly to set the hour.

4 Press ENTER/YES or CURSOR→ on the remote.

5 Press + or – on the remote repeatedly to set the minute.

6 Press ENTER/YES on the remote.

The clock starts working.

To adjust the clock

1 Press CLOCK/TIMER SET on the remote.

2 Press + or – on the remote to select "CLOCK SET?", then press ENTER/YES on the remote.

3 Do the same procedures as step 3 to 6 above.

Playing discs

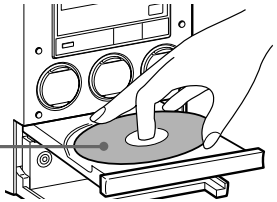
Loading a disc

1 Press ⏏ DVD.

The disc tray slides out.

2 Place a disc with the label side up on the disc tray.

When you play a 8 cm disc, place it on the inner circle of the tray.

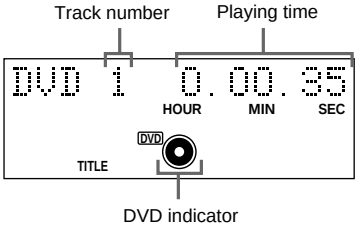


3 Press ⏏ DVD again to close the disc tray.

Playing a disc

— *Normal Play/Shuffle Play/Repeat Play/Scan/Slow-motion Play*

Before playing a DVD or a VIDEO CD, turn on your TV and select the video input. Depending on the DVD or VIDEO CD, some operations may be different or restricted. Refer to the operating instructions supplied with the disc.



1 Press FUNCTION repeatedly to switch the function to DVD.

2 Press PLAY MODE/TUNING MODE in stop mode repeatedly until the mode you want appears in the display.

Select	To play
No display (Normal Play)	The tracks on the disc in original order.
SHUFFLE (Shuffle Play)	All tracks on the disc in random order.
PGM (Program Play)	The tracks on the disc in the order you want them to be played (see “Creating your own program” on page 14).

3 Press DVD ►.

Notes

- You cannot change the play mode during playback.
- When playing DVDs, you cannot use Shuffle Play in chapters. Besides, you cannot use Shuffle Play depending on the DVD.
- When you change the function, the DVD indicator may light up even when there is no disc.

Other operations

To	Do this
Stop play	Press ■ (or DVD ■ on the remote).
Pause	Press DVD ❚❚. Press again to resume play.
Select a track or chapter	Press ⏮ or ⏭ (or DVD ⏮ or ⏭ on the remote) repeatedly.
Find a point in a track or chapter	Keep pressing ◀◀ or ▶▶ during play and release it at the desired point.
Play repeatedly* (Repeat Play)	Press REPEAT/FM MODE repeatedly during playback until "REPEAT" or "REPEAT 1" appears in the display. REPEAT: For all the tracks on the disc. REPEAT 1: For only the currently playing title, chapter, or track. To cancel playing repeatedly, press REPEAT/FM MODE repeatedly until "REPEAT" and "REPEAT 1" disappear from the display.
Locating a point quickly in fast forward or fast reverse (scan)	During playback, press DVD ◀❚ ⏪ or ⏩ ❚▶ on the remote. Each time you press the button, the speed switches (3 steps). To return to normal playback, press DVD ▶.
Change the playback speed** (Slow-motion play)	During pause mode, press DVD ◀❚ ⏪ or ⏩ ❚▶ on the remote. Each time you press the button, the speed switches (2 steps). To return to normal playback, press DVD ▶.
Remove a disc	Press ⏏ DVD.

* You cannot use Repeat Play depending on the DVD, or when playing VIDEO CDs with PBC functions. You cannot select "REPEAT 1" during Program Play.

** DVD and VIDEO CD only.

Tips

- Depending on the disc, a menu may appear on the TV screen. You can play the disc interactively by following the instructions on the menu (see page 17 for DVD, and see page 18 for VIDEO CD).
- You can use the Control Menu to play repeatedly (page 16).

To enter track number using the remote

You can also select the track you want using the remote during Normal Play.
Press the numeric buttons, then press ENTER. The playback automatically starts.

Creating your own program

— Program Play

You can make a program of up to 25 steps.

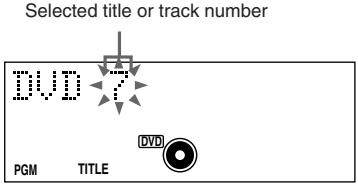
Using the front panel display

1 Press FUNCTION repeatedly to switch the function to DVD.

2 Press PLAY MODE/TUNING MODE in stop mode repeatedly until "PGM" appears.

3 Press DVD I◄◄ or ►►I on the remote repeatedly until the desired title or track number appears.

When programming a DVD, press ENTER/YES on the remote, then press DVD I◄◄ or ►►I on the remote repeatedly until the desired chapter number appears.

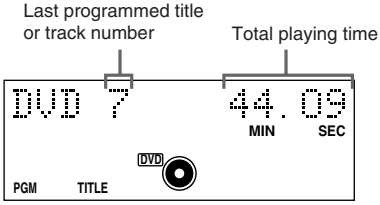


4 Press ENTER/YES on the remote.

The title/chapter, or track is programmed.

The step number appears, followed by the last programmed title or track number.

If you made a mistake, you can clear the last step from the program by pressing CLEAR on the remote.



5 To programme additional tracks, repeat steps 3 and 4.

6 Press DVD ►.

Other operations

To	Do this
Cancel Program Play	Press PLAY MODE/TUNING MODE in stop mode repeatedly until both "SHUFFLE" and "PGM" disappear.
Check the program order	Press DVD I◄◄ or ►►I on the remote repeatedly during Program Play.
Add a track to the end of the program	Perform steps 3 and 4 in stop mode.

Tips

- The program you made remains after Program Play finishes. To play the same program again, press DVD ►. However, the program is cleared when you open the disc tray.
- "---.--" appears when the total program time exceeds 1000 minutes, or when DVD titles/chapters are programmed.

Note

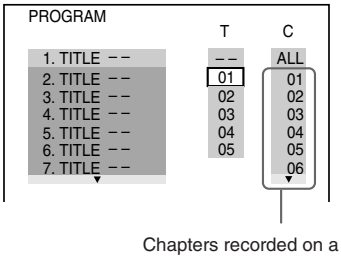
Depending on the DVD, you cannot use Program Play.

Using the on-screen display

The North American model is the model used for OSD (on-screen display) illustration purposes.

1 Press PLAY MODE/TUNING MODE repeatedly until "PROGRAM" appears in the on-screen display.

The Program Display appears on the screen.

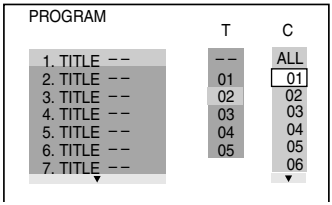


2 Select the title, chapter, or track you want to program.

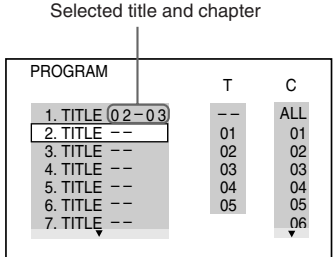
■ When programming a DVD

For example, select chapter "03" of title "02".

Press ↑/↓ or the numeric buttons to select "02" under "T", then press ENTER.



Next, press ↑/↓ or the numeric buttons to select "03" under "C", then press ENTER.



■ When programming a VIDEO CD or CD

For example, select track "02".

Press ↑/↓ or the numeric buttons to select "02" under "T", then press ENTER.

To erase a step

Press CLEAR on the remote. Each time you press the button, the last programmed step is erased.

You can also erase a step by selecting "– –" in the on-screen display and pressing ENTER.

3 To program other titles, chapters, or tracks, repeat step 2.

4 Press DVD ► to start Program Play.

Program Play starts. When the program ends, you can restart the same program again by pressing DVD ►.

To return to normal play

Press PLAY MODE/TUNING MODE repeatedly until "CONTINUE" appears in the TV screen.

Note

The displayed number of titles, chapters, or tracks is the same as that recorded on the disc.

Resuming playback from the point you stopped the disc

— Resume Play

This system memorizes the point where you stopped the disc so you can resume from that point.

1 While playing a disc, press ■ (or DVD ■ on the remote) to stop playback.

"RESUME" appears in the display. If "RESUME" does not appear, Resume Play is not available.

2 Press DVD ►.

The player starts playback from the point you stopped the disc in step 1.

To view from the beginning of the disc

Press ■ (or DVD ■ on the remote) twice, then press DVD ►.

Notes

- Depending on where you stopped the disc, the system may resume playback from a different point.
- Resume play is canceled when:
  - you open the disc tray.
  - you change the play mode.
  - you change the settings using the Setup Display.

Playing repeatedly

— Repeat Play

You can play all the titles/tracks or a single title/chapter/track on a disc.

In Shuffle or Program Play mode, the system repeats the titles or tracks in the shuffled or programmed order.

Use the remote for the operation.

1 Press DVD DISPLAY during playback.

The Control Menu appears.

2 Press ↑ or ↓ repeatedly to select "REPEAT", then press ENTER.

The options for "REPEAT" appear.

3 Press ↑ or ↓ repeatedly to select the Repeat Play setting.

■ When playing a DVD and when Program Play is set to OFF

- OFF: does not play repeatedly.
- DISC: repeats all the titles.
- TITLE: repeats the current title.
- CHAPTER: repeats the current chapter.

■ When playing a VIDEO CD/CD and when Program Play is set to OFF

- OFF: does not play repeatedly.
- DISC: repeats all the tracks.
- TRACK: repeats the current track.

■ When Program Play is set to ON

- OFF: does not play repeatedly.
- ON: repeats Program Play or Shuffle Play.

4 Press ENTER.

To cancel Repeat Play

Select “OFF” in step 3, or press CLEAR.

To turn off the Control Menu

Press DVD DISPLAY repeatedly until the Control Menu is turned off.

Tip

You can set Repeat Play when the playback is stopped. Press REPEAT/FM MODE repeatedly to select the setting, then press DVD ►. The Repeat Play starts.

Playing DVDs using the menu

Some DVDs have menus to help you enjoy the DVDs. You can play DVDs using these menus. Use the remote for the operation.

Using the DVD top menu

A DVD is divided into long sections of a picture or a music feature called “titles”. When you play a DVD which contains several titles, you can select the title you want using the menu.

1 Press DVD TOP MENU.

The menu appears on the TV screen. The contents of the menu vary from disc to disc.

2 Press ↑/↓/←/→ or the numeric buttons to select the title you want to play.

3 Press ENTER.

The playback starts from the selected title.

Using the DVD menu

Some DVDs allow you to select the disc contents using a menu. When you play these DVDs, you can select items such as the language for the subtitles and the language for the sound using the DVD menu.

1 Press DVD MENU.

The menu appears on the TV screen. The contents of the menu vary from disc to disc.

2 Press ↑/↓/←/→ or the numeric buttons to select the item you want to change.

3 To change other items, repeat step 2.

4 Press ENTER.

Playing VIDEO CDs with PBC functions (Ver. 2.0)

— PBC Play

You can use menus on your TV screen to enjoy the disc's interactive software. The menu format and structure may differ depending on each disc.

1 Press DVD ► to start playing a VIDEO CD with PBC functions (Ver. 2.0).

The PBC menu appears on the TV screen.

2 Press ↑/↓ or the numeric buttons on the remote repeatedly to select the item number you want.

3 Press ENTER on the remote.

4 Continue playback according to the instructions on the menus to enjoy interactive playback.

Refer to the operating instructions supplied with the disc, as the operationg procedure may differ according to the VIDEO CD.

To go back to the menu

Press RETURN ↶ on the remote.

To cancel playback with PBC functions

When the playback is stopped, press DVD ⏮ or ⏭ on the remote, or the numeric buttons on the remote to select a track, then press DVD ►.

"Play without PBC" appears on the TV screen and playback starts from the selected track. Still images, such as the menu screens, will not be shown.

To return to PBC playback, press DVD ■ on the remote twice, then press DVD ►.

Note

Depending on the VIDEO CD, "Press ENTER" in step 3 may appear as "Press SELECT" in the operating instructions supplied with the disc. In this case, press DVD ►.

Using the Setup Display

By using the Setup Display, you can make various adjustments to items such as picture and sound. You can also set a language for the subtitles and the Setup Display, among other things. For details on each Setup Display item, see pages 20–22. For an overall list of Setup Display items, see page 59.
The North American model is the model used for OSD (on-screen display) illustration purposes in this section.

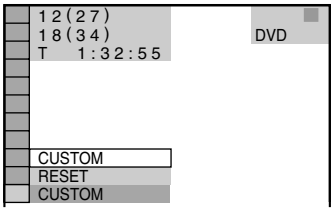
Use the remote for the operation.

1 When the playback is stopped, press DVD DISPLAY.

The Control Menu appears.
If you press DVD SETUP, you can go to step 4 directly.

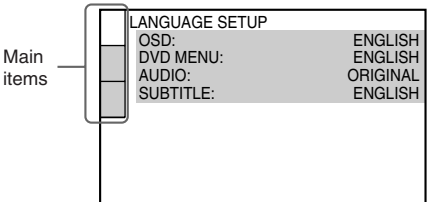
2 Press ↑ or ↓ repeatedly to select "SETUP", then press ENTER.

The options for "SETUP" appear.



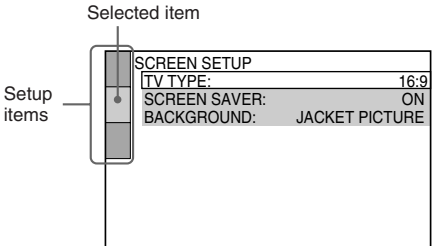
3 Press ↑ or ↓ repeatedly to select "CUSTOM", then press ENTER.

The Setup Display appears.



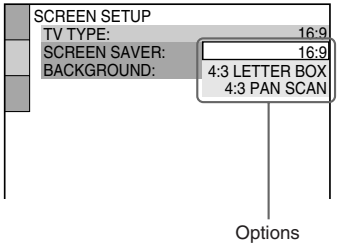
4 Press ↑ or ↓ repeatedly to select the setup item from the displayed list, then press ENTER.

The selected setup item appears.
Example: "SCREEN SETUP"



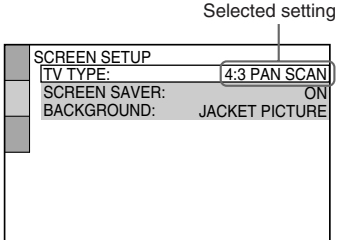
5 Press ↑ or ↓ repeatedly to select an item, then press ENTER.

The options for the selected item appear.
Example: "TV TYPE"



6 Press ↑ or ↓ repeatedly to select a setting, then press ENTER.

The setting is selected and the setup is completed.
Example: "4:3 PAN SCAN"



continued

To turn off the Setup Display

Press DVD DISPLAY repeatedly until the Setup Display is turned off.

Tip

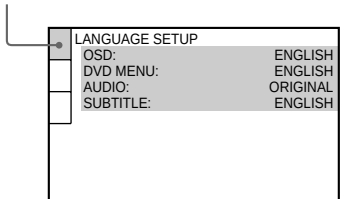
If you select “RESET” in step 3, you can reset all of the “SETUP” settings on pages 20–22 (except for PARENTAL CONTROL) to the default settings. After you select “RESET” and press ENTER, select “YES” and press ENTER to reset the settings (it takes a few seconds to complete). Do not press I/⏻ when resetting the system.

Setting the display or sound track language

— LANGUAGE SETUP

“LANGUAGE SETUP” allows you to set various languages for the on-screen display or sound track.

Select “LANGUAGE SETUP” in the Setup Display.



■ OSD (on-screen Display)

Switches the display language on the screen. Select the language from the displayed list.

■ DVD MENU (DVD only)

Select the language for the DVD menu.*

■ AUDIO (DVD only)

Switches the language of the sound track. Select the language from the displayed list.* When you select “ORIGINAL”, the language given priority in the disc is selected.

■ SUBTITLE (DVD only)

Switches the language of the subtitle. Select the language from the displayed list.* When you select “AUDIO FOLLOW”, the language for the subtitles changes according to the language you selected for the sound track.

* If you select “OTHERS →” in “DVD MENU”, “AUDIO”, or “SUBTITLE”, select and enter the language code from the list using the numeric buttons (page 57). After you selected, the language code (4 digits) is displayed the next time you select “OTHERS →”.

Note

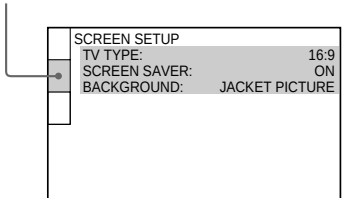
When you select a language that is not recorded on the DVD, one of the recorded languages will be automatically selected (except for “OSD”).

Settings for the display

— SCREEN SETUP

Select settings according to the connected TV.

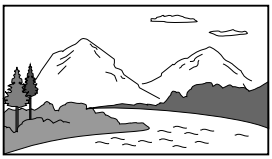
Select “SCREEN SETUP” in the Setup Display.



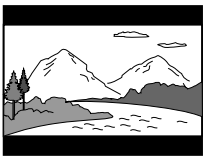
■ TV TYPE (DVD only)

Select the aspect ratio of the connected TV.

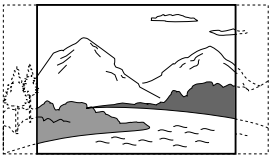
- 16:9: Select this when you connect a wide-screen TV or a TV with a wide mode function.



- 4:3 LETTER BOX: Select this when you connect a 4:3 screen TV. This setting displays a wide picture with bands displayed on the upper and lower portions of the screen.



- 4:3 PAN SCAN: Select this when you connect a 4:3 screen TV. This setting displays the wide picture on the entire screen and cuts off the portions that do not fit.



Tip

You can select “16:9” by pressing WIDE.

Note

Depending on the DVD, “4:3 LETTER BOX” may be selected automatically instead of “4:3 PAN SCAN” or vice versa.

■ SCREEN SAVER

Turn on and off the screen saver. If you turn on the screen saver, the screen saver image appears when you leave the player in pause or stop mode for 15 minutes or when you play a CD for more than 15 minutes. The screen saver will help prevent your display device from becoming damaged (ghosting). Press DVD ► to turn off the screen saver.

- ON: Turns on the screen saver.
- OFF: Turns off the screen saver.

■ BACKGROUND

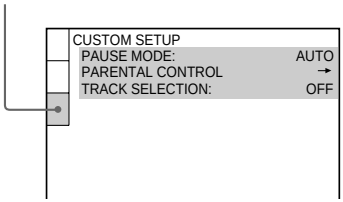
Select the background color or picture on the TV screen when the playback is stopped or while playing a CD.

- JACKET PICTURE: The jacket picture (still picture) appears in the background, but only when the jacket picture is already recorded on the disc (CD-EXTRA, etc). If the disc does not contain a jacket picture, the “GRAPHICS” picture appears.
- GRAPHICS: The preset picture stored in the system appears in the background.
- BLUE: The background color is blue.
- BLACK: The background color is black.

Custom settings

— *CUSTOM SETUP*

Select “CUSTOM SETUP” in the Setup Display.



■ COLOR SYSTEM (Except for Pan American and European models)

Select the color system when you play a VIDEO CD.

- AUTO: Outputs the video signal in the system of the disc, either PAL or NTSC. If your TV uses a DUAL system, select AUTO.
- PAL: Changes the video signal of an NTSC disc and outputs it in the PAL system.
- NTSC: Changes the video signal of a PAL disc and outputs it in the NTSC system.

Note

You cannot change the color system of the disc itself.

■ PAUSE MODE (DVD only)

Select the picture in pause mode.

- AUTO: A picture including subjects that move dynamically is output with no jitter. Normally select this position.
- FRAME: A picture including subjects that do not move dynamically is output in high resolution.

■ PARENTAL CONTROL → (DVD only)

Set a password and playback limitation level for DVDs with playback limitation for children. For details, see “Limiting playback by children (Parental Control)” on page 30.

■ TRACK SELECTION (DVD only)

Gives the priority to the sound track which contains the highest number of channels when you play a DVD on which multiple audio formats (PCM, DTS, or Dolby Digital format) are recorded.

- OFF: No priority given.
- AUTO: Priority given.

Notes

- When you set to “AUTO”, the language setting may change. The “TRACK SELECTION” setting has higher priority than the “AUDIO” setting in “LANGUAGE SETUP” (page 20).
- If PCM, DTS, and Dolby Digital sound tracks have the same number of channels, the system selects PCM, DTS, and Dolby Digital sound tracks in this order.
- Depending on the DVD, the audio channel with priority may be predetermined. In this case, you cannot give priority to the DTS, or Dolby Digital audio format by selecting “AUTO”.

Checking the playing time and remaining time

You can check the playing time and remaining time of the current title, chapter, or track, and the total playing time of the disc.

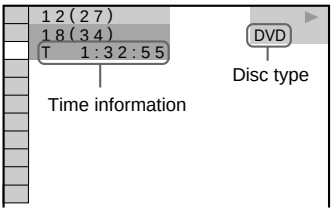
Use the remote for the operation.

1 Press DVD DISPLAY during playback.

The Control Menu appears.

2 Press DISPLAY repeatedly to change the time information.

The display and the kinds of time that you can change depend on the disc you are playing.



■ When playing a DVD

- T **:**:**
  Playing time of the current title
- T–**:**:**
  Remaining time of the current title
- C **:**:**
  Playing time of the current chapter
- C–**:**:**
  Remaining time of the current chapter

■ When playing a VIDEO CD (with PBC functions)

- **:**
  Playing time of the current scene

■ When playing a VIDEO CD (without PBC functions) or CD

- T **:**
  Playing time of the current track
- T–**:**
  Remaining time of the current track
- D **:**
  Playing time of the current disc
- D–**:**
  Remaining time of the current disc

To turn off the Control Menu

Press DVD DISPLAY repeatedly until the Control Menu is turned off.

Checking the playback information

— ADVANCED

(DVD only)

You can check information such as the bit rate or the disc layer that is being played.
While playing a disc, an approximate bit rate of the playback picture is always displayed as Mbps (Mega bit per second) and the audio as Kbps (Kilo bit per second).

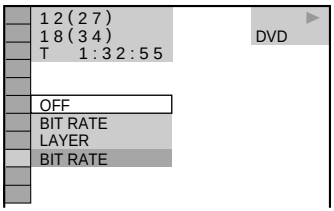
Use the remote for the operation.

1 Press DVD DISPLAY during playback.

The Control Menu appears.

2 Press ↑ or ↓ repeatedly to select "ADVANCED", then press ENTER.

The options for "ADVANCED" appear.



3 Press ↑ or ↓ repeatedly to select the item.

For each item, see "Displays of each item".

- BIT RATE: Displays the bit rate.
- LAYER: Displays the layer and the pick-up point.

4 Press ENTER.

To close the "ADVANCED" display

Select "OFF" in step 3.

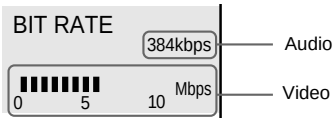
To turn off the Control Menu

Press DVD DISPLAY repeatedly until the Control Menu is turned off.

Displays of each item

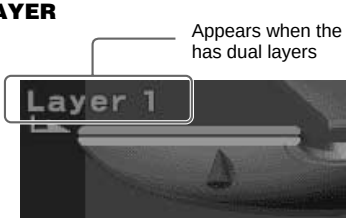
By pressing DVD DISPLAY repeatedly, you can display either "BIT RATE" or "LAYER", whichever was selected in "ADVANCED".

BIT RATE



Bit rate refers to the amount of video/audio data per second in a disc. The higher the bit rate, the larger the amount of data. When the bit rate level is high, there is a large amount of data. However, this does not always mean that you can get higher quality pictures or sounds.

LAYER



This item indicates the approximate point where the disc is playing. When the DVD has dual layers, the system indicates which layer is being read ("Layer 0" or "Layer 1"). For details on the layers, see page 55 (DVD).

Changing the sound

If a DVD is recorded with multilingual tracks, you can select the language you want while playing the DVD. If the DVD is recorded in multiple audio formats, you can select the audio format you want while playing the DVD.

With stereo CDs or VIDEO CDs, you can select the sound from the right or left channel and listen to the sound of the selected channel through both the right and left speakers. (In this case, the sound loses its stereo effect.) For example, when playing a disc containing a song with the vocals on the right channel and the instruments on the left channel, you can select the left channel and hear only the instruments from both speakers.

Use the remote for the operation.

1 Press DVD DISPLAY during playback.

The Control Menu appears.

2 Press ↑ or ↓ repeatedly to select "AUDIO", then press ENTER.

The options for "AUDIO" appear.

3 Press ↑ or ↓ repeatedly to select the audio signal you want.

■ When playing a DVD

Depending on the DVD, the choice of the language varies. When 4 digits are displayed, they represent the language code (see the language code list on page 57). When the same language is displayed twice or more, the DVD is recorded in multiple audio formats.

■ When playing a VIDEO CD or CD

- STEREO: The standard stereo sound.
- 1/L: The sound of the left channel (monaural).
- 2/R: The sound of the right channel (monaural).

The default setting is "STEREO".

4 Press ENTER.

To turn off the Control Menu

Press DVD DISPLAY repeatedly until the Control Menu is turned off.

Tip

You can select the audio setting by pressing AUDIO. Each time you press the button, the setting changes.

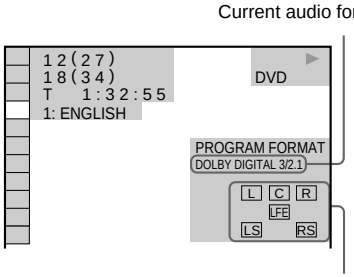
Notes

- For discs not recorded in multiple audio format, you cannot change the sound.
- Depending on the DVD, you may not be able to change the sound even if the DVD is recorded in multiple audio format.
- For VIDEO CDs and CDs, the setting returns to "STEREO" when you turn off the system or open the disc tray.
- During DVD playback, the sound may change automatically.

Displaying the audio information of the disc

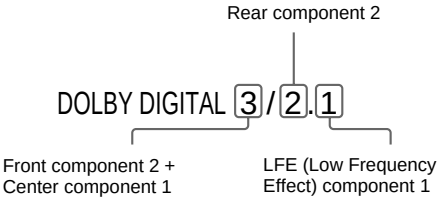
(DVD only)

When you select "AUDIO", the channels being played are displayed on the screen.



* "PCM", "DTS", or "DOLBY DIGITAL" is displayed.
For "DOLBY DIGITAL", the channels in the playing track are displayed numerically as follows:

For Dolby Digital 5.1 ch:



continued

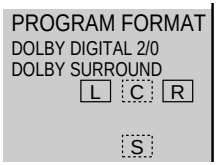
** The letters in the program format display mean the following sound components recorded in the track, regardless of the actual number of speakers:

L: Front (left)
R: Front (right)
C: Center (monaural)
LS: Rear (left)
RS: Rear (right)
S: Rear (monaural): The rear component of the Dolby Surround processed signal or the Dolby Digital signal.
LFE: LFE (Low Frequency Effect)

The display examples are as follows:

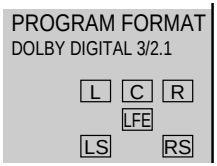
- PCM (stereo)

- Dolby Surround



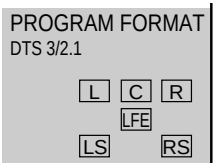
- Dolby Digital 5.1ch

"LFE" is always enclosed in a solid line regardless of the LFE signal component being output.



- DTS

"LFE" is always enclosed in a solid line regardless of the LFE signal component being output.



Searching for a title/ chapter/track/index/scene

You can search a DVD disc by title or chapter, and you can search a VIDEO CD or CD by track, index, or scene. As titles and tracks are assigned unique numbers on the disc, you can select the desired one by entering its number. Or, you can search for a scene using the time code (TIME SEARCH).

Use the remote for the operation.

1 Press DVD DISPLAY.

The Control Menu appears.

2 Press ↑ or ↓ repeatedly to select the search method.

■ When playing a DVD

"TITLE", "CHAPTER", or "TIME"

Select "TIME" for TIME SEARCH.

■ When playing a VIDEO CD

"TRACK" or "INDEX"

■ When playing a VIDEO CD (with PBC functions)

"SCENE"

■ When playing a CD

"TRACK" or "INDEX"

3 Press ENTER.

"** (**)" changes to "-- (**)".

The number in parentheses indicates the total number of titles, chapters, tracks, indexes, or scenes.

4 Press ↑ or ↓ repeatedly, or press the numeric buttons to select the title, chapter, track, index, or scene number you want to search.

If you make a mistake

Press CLEAR to cancel the number, then select another number.

5 Press ENTER.

The playback starts from the selected number.

To search for a scene using the time code (TIME SEARCH)

(DVD only)

1 In step 2, select "TIME".

"T **:**:**" (playing time of the current title) is selected.

2 Press ENTER.

"T **:**:**" changes to "T --:--:--".

3 Input the time code using the numeric buttons, then press ENTER.

For example, to find the scene at 2 hours, 10 minutes, and 20 seconds after the beginning, just enter "2:10:20".

To cancel

Press RETURN ↩.

To turn off the Control Menu

Press DVD DISPLAY repeatedly until the Control Menu is turned off.

Notes

- The displayed number of titles, chapters, or tracks is the same as that recorded on the disc.
- When playing a VIDEO CD with PBC functions, index number does not appear.
- When the chapter number does not appear, you cannot search the disc by chapter.
- The number in parentheses does not appear when it is 100 or more.

Changing the angles

(DVD only)

When playing a DVD on which various angles (multi-angles) for a scene are recorded, the "ANGLE" indicator lights in green. This means that you can change the viewing angle. For example, while playing a scene of a train in motion, you can display the view from either the front of the train, the left window of the train or from the right window without having the train's movement interrupted.

Use the remote for the operation.

1 Press DVD DISPLAY during playback.

The Control Menu appears.

2 Press ↑ or ↓ repeatedly to select "ANGLE".

The angle number appears. The number in parentheses indicates the total number of angles.

3 Press → or ENTER.

The angle number changes to "–".

4 Select the angle you want using the numeric buttons or ↑/↓, then press ENTER.

The angle is changed to the selected angle.

To turn off the Control Menu

Press DVD DISPLAY repeatedly until the Control Menu is turned off.

Tip

You can select the angle by pressing ANGLE. Each time you press the button, the angle changes.

Note

Depending on the DVD, you may not be able to change the angles even if multi-angles are recorded on the DVD.

Displaying the subtitles

(DVD only)

With DVDs on which multilingual subtitles are recorded, you can change the subtitle language while playing a DVD, or turn the subtitles on or off whenever you want. For example, you can select the language you want to master and turn the subtitles on for better understanding.

Use the remote for the operation.

1 Press DVD DISPLAY during playback.

The Control Menu appears.

2 Press ↑ or ↓ repeatedly to select "SUBTITLE", then press ENTER.

The options for "SUBTITLE" appear.

3 Press ↑ or ↓ repeatedly to select the language you want, then press ENTER.

The subtitles are displayed in the selected language.

To cancel the SUBTITLE setting

Select "OFF" in step 3.

To turn off the Control Menu

Press DVD DISPLAY repeatedly until the Control Menu is turned off.

Tip

You can select the subtitle by pressing SUBTITLE . Each time you press the button, the language changes.

Notes

- When 4 digits are displayed in step 3, they indicate the language code. Refer to the language code list on page 57 to see the language the code represents.
- Depending on the DVD, you may not be able to change the subtitles even if multilingual subtitles are recorded on the DVD.

Locking discs

— CUSTOM PARENTAL CONTROL/ PARENTAL CONTROL

You can set two kinds of playback restrictions for the disc.

- Custom Parental Control

  You can set the playback restrictions so that the system will not play inappropriate discs. You can set the same Custom Parental Control password for up to 50 discs. When you set the fifty-first disc, the playback restriction for the first disc is canceled.
- Parental Control

  You can limit the playback of some DVDs according to a predetermined level such as the age of the users. The limited scene is not played, or replaced by a different scene.

The same password is used for both Custom Parental Control and Parental Control.

Use the remote for the operation.

Custom Parental Control

1 Insert the disc you want to lock.

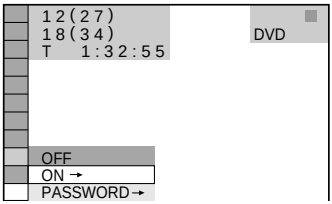
If the disc is playing, press DVD ■ to stop playback.

2 When the playback is stopped, press DVD DISPLAY.

The Control Menu appears.

3 Press ↑ or ↓ repeatedly to select "CUSTOM PARENTAL CONTROL", then press ENTER.

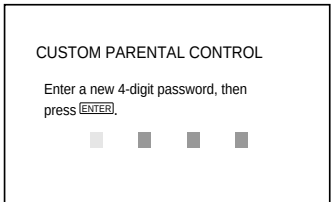
"CUSTOM PARENTAL CONTROL" is selected.



4 Press ↑ or ↓ repeatedly to select "ON →", then press ENTER.

■ If you have not entered a password

The display for registering a new password appears.

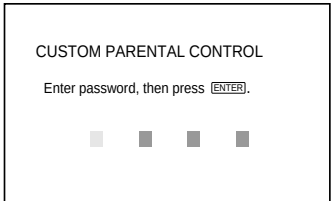


Enter a 4-digit password using the numeric buttons, then press ENTER.

The display for confirming the password appears.

■ When you have already registered a password

The display for entering the password appears.



5 Enter or re-enter your 4-digit password using the numeric buttons, then press ENTER.

"Custom parental control is set." appears and the screen returns to the Control Menu Display.

If you make a mistake entering your password

Press ← before you press ENTER and input the correct number.

continued

If you make a mistake

Press RETURN ↶, then start from step 3 again.

To turn off the Control Menu

Press RETURN ↶, then press DVD DISPLAY repeatedly until the Control Menu is turned off.

To turn off the Custom Parental Control function

1 In step 4, select "OFF →", then press ENTER.

2 Enter your 4-digit password using the numeric buttons, then press ENTER.

To change the password

1 In step 4, select "PASSWORD →", then press ENTER.
The display for entering the password appears.

2 Enter your 4-digit password using the numeric buttons, then press ENTER.

3 Enter a new 4-digit password using the numeric buttons, then press ENTER.

4 To confirm your password, re-enter it using the numeric buttons, then press ENTER.

Playing the disc for which Custom Parental Control is set

1 Insert the disc for which Custom Parental Control is set.

The "CUSTOM PARENTAL CONTROL" display appears.

2 Enter your 4-digit password using the numeric buttons, then press ENTER.

The system is ready for playback.

Tip

If you forgot your password, enter the 6-digit number "199703" using the numeric buttons when the "CUSTOM PARENTAL CONTROL" display asks you for your password, then press ENTER. The display will ask you to enter a new 4-digit password.

Limiting playback by children (Parental Control)

(DVD only)

1 When the playback is stopped, press DVD DISPLAY.

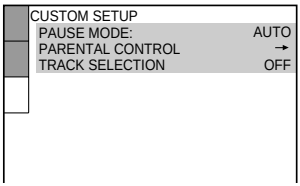
The Control Menu appears.

2 Press ↑ or ↓ repeatedly to select "SETUP", then press ENTER.

3 Press ↑ or ↓ repeatedly to select "CUSTOM", then press ENTER.

4 Press ↑ or ↓ repeatedly to select "CUSTOM SETUP", then press ENTER.

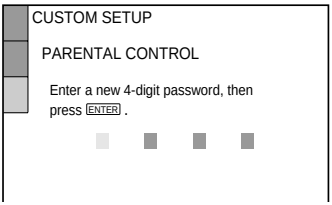
The "CUSTOM SETUP" display appears.



5 Press ↑ or ↓ repeatedly to select "PARENTAL CONTROL →", then press ENTER.

■ If you have not entered a password

The display for registering a new password appears.

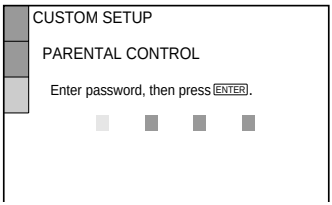


Enter a 4-digit password using the numeric buttons, then press ENTER.

The display for confirming the password appears.

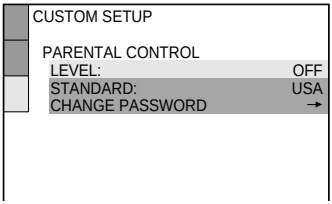
■ When you have already registered a password

The display for entering the password appears.



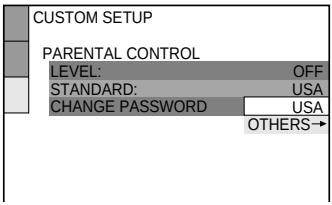
6 Enter or re-enter your 4-digit password using the numeric buttons, then press ENTER.

The display for setting the playback limitation level and changing the password appears.



7 Press ↑ or ↓ repeatedly to select "STANDARD", then press ENTER.

The options for "STANDARD" appears.



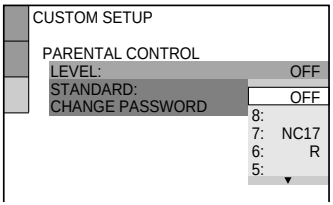
8 Press ↑ or ↓ repeatedly to select a geographic area as the playback limitation level, then press ENTER.

The area is selected.

When you select "OTHERS →", select and enter the standard code in the table on page 32 using the numeric buttons.

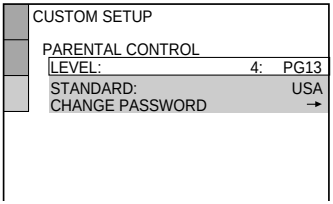
9 Press ENTER.

The options for "LEVEL" appears.



10 Press ↑ or ↓ repeatedly to select the level you want, then press ENTER.

The Parental Control setting is completed.



The lower the value, the more strict the limitation.

If you make a mistake

Press RETURN ↶ to go back to the previous screen.

To turn off the Control Menu

Press DVD DISPLAY repeatedly until the Control Menu is turned off.

continued

To turn off the Parental Control function and play the DVD after entering your password

Set “LEVEL” to “OFF” in step 10.

To change the password

1 In step 7, press ↓ to select “CHANGE PASSWORD →”, then press ENTER. The display for entering the password appears.

2 Follow step 6 to enter a new password.

Playing the disc for which Parental Control is set

1 Insert the disc and press DVD ►.

The “PARENTAL CONTROL” display appears.

2 Enter your 4-digit password using the numeric buttons, then press ENTER.

The playback starts.

Tip

If you forgot your password, remove the disc, press DVD SETUP, then repeat steps 4 and 5 of “Limiting playback by children”. When you are asked to enter your password, enter “199703” using the numeric buttons, then press ENTER. The display will ask you to enter a new 4-digit password. After you enter a new 4-digit password, replace the disc in the system and press DVD ►. When the “PARENTAL CONTROL” display appears, enter your new password.

Notes

- When you play DVDs which do not have the Parental Control function, playback cannot be limited on this system.
- Depending on the DVD, you may be asked to change the parental control level while playing the disc. In this case, enter your password, then change the level.

Area code

Standard	Code number	Standard	Code number
Argentina	2044	Korea	2304
Australia	2047	Malaysia	2363
Austria	2046	Mexico	2362
Belgium	2057	Netherlands	2376
Brazil	2070	New Zealand	2390
Canada	2079	Norway	2379
Chile	2090	Pakistan	2427
China	2092	Philippines	2424
Denmark	2115	Portugal	2436
Finland	2165	Russia	2489
France	2174	Singapore	2501
Germany	2109	Spain	2149
Hong Kong	2219	Sweden	2499
India	2248	Switzerland	2086
Indonesia	2238	Taiwan	2543
Italy	2254	Thailand	2528
Japan	2276	United Kingdom	2184

Presetting radio stations

You can preset up to 20 FM stations and 10 AM stations. You can then tune in any of those stations simply by selecting the corresponding preset number.

There are two ways to store the station presets.

To	Method
Automatically tune in all of the stations that can be received in your area and then store them manually	Automatic Tuning Preset
Manually tune in and store the radio frequency of your favorite stations	Manual Tuning Preset

Setting presets through automatic tuning

1 Press TUNER FM or TUNER AM (or TUNER BAND on the remote) to select FM or AM.

2 Press PLAY MODE/TUNING MODE repeatedly until "AUTO" appears in the display.

3 Press TUNING +/– (or TUNER +/– on the remote).

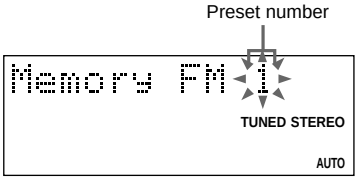
The frequency changes as the system scans for a station. Scanning stops automatically when a station is tuned in. At that time, "TUNED" and "STEREO" (for stereo program only) appear.

If "TUNED" does not appear and the scanning does not stop

Set the frequency of the desired radio station as described in steps 2 through 5 of "Setting presets through manual tuning".

4 Press TUNING MEMORY on the remote.

5 Press TUNING +/– (or TUNER +/– on the remote) repeatedly to select the desired preset station.



6 Press ENTER/YES on the remote.

The station is stored to the selected preset number.

7 Repeat steps 1 through 6 to preset other stations.

Setting presets through manual tuning

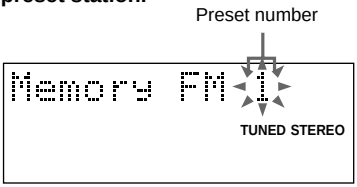
1 Press TUNER FM or TUNER AM (or TUNER BAND on the remote) to select FM or AM.

2 Press PLAY MODE/TUNING MODE repeatedly until "AUTO" and "PRESET" disappear from the display.

3 Press TUNING +/– (or TUNER +/– on the remote) repeatedly to tune in the desired station.

4 Press TUNING MEMORY on the remote.

5 Press TUNING +/– (or TUNER +/– on the remote) repeatedly to select the desired preset station.



6 Press ENTER/YES on the remote.

The station is stored to the selected preset number.

7 Repeat steps 1 through 6 to preset other stations.

continued

Other Operations

To	Do this
Tune in a station with a weak signal	Follow the procedure described in “Setting presets through manual tuning”.
Change the preset station	Start over from step 1.
Change the preset number	Start over from step 1.

To change the AM tuning interval (Except for the European, Middle Eastern and Philippine models)

The AM tuning interval is factory-preset to 9 kHz (or 10 kHz for some areas). To change the AM tuning interval, tune in any AM station first, then turn off the system. While holding REPEAT/FM MODE, press **I**/⏻. When you change the interval, all the AM preset stations are erased. To reset the interval, tune in any AM station first, then turn off the system. While holding REPEAT/FM MODE, press **I**/⏻.

Note

You cannot change the AM tuning interval in the Power Saving Mode.

Tips

- The preset stations are retained for about a day even if you disconnect the mains lead or if a power failure occurs.
- To improve the reception, adjust the supplied antennas or connect an external antenna.

Listening to the radio

You can listen to a radio station either by selecting a preset station, or by manually tuning in the station.

Listening to a preset station

— Preset Tuning

Preset radio stations in the tuner’s memory first (see “Presetting radio stations” on page 33).

1 Press TUNER FM or TUNER AM (or TUNER BAND on the remote) to select FM or AM.

2 Press PLAY MODE/TUNING MODE repeatedly until “PRESET” appears in the display.

3 Press TUNING +/– (or TUNER +/– on the remote) repeatedly to select the desired preset station.

To select the desired preset number using the numeric buttons on the remote

Press numeric buttons instead of performing step 3.
To enter preset number 10 or higher, press >10 and the corresponding numeric buttons. To enter 0, press 10/0.

Example:

To enter preset number 20, press >10, then 2 and 10/0.

Listening to non-preset radio station

— Manual Tuning

1 Press TUNER FM or TUNER AM (or TUNER BAND on the remote) to select FM or AM.

2 Press PLAY MODE/TUNING MODE repeatedly until "AUTO" and "PRESET" disappear from the display.

3 Press TUNING +/– (or TUNER +/– on the remote) repeatedly to tune in the desired station.

Tips

- To improve broadcast reception, adjust the supplied antennas, or connect a commercially available external antenna.
- When an FM stereo program has static noise, press REPEAT/FM MODE repeatedly until "MONO" appears. There will be no stereo effect, but the reception will improve.
- Press PLAY MODE/TUNING MODE repeatedly until "AUTO" appears in step 2 above, then press TUNING +/– (or TUNER +/– on the remote). The frequency indication changes and scanning stops when the system tunes in a station (Automatic Tuning).

Using the Radio Data System (RDS)

(European model only)

What is the Radio Data System?

Radio Data System (RDS) is a broadcasting service that allows radio stations to send additional information along with the regular program signal. RDS is available only on FM stations.*

Note

RDS may not work properly if the station you are tuned in is not transmitting the RDS signal properly or if the signal is weak.

* Not all FM stations provide RDS service, nor do they provide the same types of services. If you are not familiar with the RDS system, check with your local radio stations for details on RDS services in your area.

Receiving RDS broadcasts

Simply select a station from the FM band.

When you tune in a station that provides RDS services, the station name appears in the display.

To check the RDS information

Each time you press DISPLAY on the remote, the display changes cyclically as follows:

Station name* → Frequency → Clock display → BASS level → TREBLE level

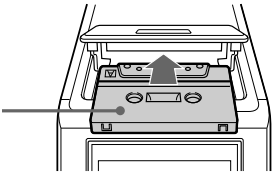
* If the RDS broadcast is not properly received, the station name may not appear in the display.

Loading a tape

1 Press ⏏ PUSH.

2 Load a recorded/recordable tape into the cassette holder.

With the side you want to play/ record facing up



Playing a tape

You can use TYPE I (normal) tape.

1 Press FUNCTION repeatedly to switch the function to TAPE.

2 Press DIRECTION repeatedly to select "⇄" to play one side of a tape, "⇄)" to play both sides, or "(⇄)"* to play both sides repeatedly.

* The tape deck stops automatically after repeating the sequence five times.

3 Press TAPE ◄►.

Press TAPE ◄► again to play the bottom side.

Other operations

To	Do this
Stop play	Press ■ (or TAPE ■ on the remote).
Pause	Press TAPE ❚❚. Press again to resume play.
Fast-forward or rewind	Press ◄◄ or ►► (or TAPE ◄◄ or ►► on the remote).
Remove the tape	Press ⏏ PUSH.

Recording to a tape

–– CD Synchro Recording/Recording Manually/Program Edit

You can record from a DVD, VIDEO CD, CD (or connected components) or radio. You can use Type I (normal) tape.

Steps	Recording from a VIDEO CD/CD (CD Synchro Recording)	Recording manually
1	**Load a recordable tape into the cassette holder.**	
2	**Load a disc onto the disc tray.**	**Press FUNCTION repeatedly to select the source you want to record from.**
3	**Press FUNCTION repeatedly until "DVD" appears in the display.**	**Load a disc (or other audio source), or tune in the desired station.**
4	**Press CD SYNCHRO.**	**Press ● REC.**
	The tape stands by for recording. "REC" and "▶" (or "◀") appear. **To start recording on the side facing away from you, press TAPE ◀▶ until "REC▶" changes to "◀REC".**	
5	**Press DIRECTION repeatedly to select "⇄" to record on one side of the tape, or "⇄" or "↻⇄" to record on both sides.**	
6	**Press TAPE ❚❚.**	**Press TAPE ❚❚, and then start playing the desired source.**

To stop recording

Press ■ (or TAPE ■ on the remote).

Note

Depending on the VIDEO CD, you cannot use the CD Synchro Recording. In this case, record from the VIDEO CD manually.

Tip

For recording manually:
To pause recording, press TAPE ❚❚.

continued

Recording a VIDEO CD/CD by specifying the track order

— Program Edit

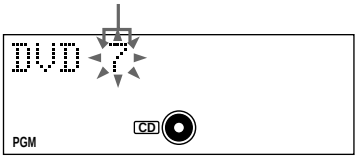
1 Insert a recordable tape into the cassette holder.

2 Press FUNCTION repeatedly until "DVD" appears in the display.

3 When the playback is stopped, press PLAY MODE/TUNING MODE repeatedly until "PGM" appears.

4 Press DVD I◄◄ or ►►I on the remote repeatedly until the desired track number appears.

Selected track number



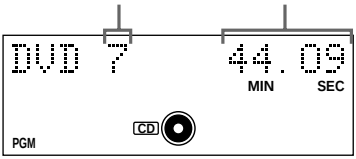
5 Press ENTER/YES on the remote.

The track is programmed. The step number appears, followed by the last programmed track number.

If you made a mistake, you can clear the last step from the program by pressing CLEAR on the remote.

Last programmed track number

Total playing time



6 To program additional steps, repeat steps 4 and 5.

7 Press CD SYNCHRO.

The tape stands by for recording and the CD stands by for playback.

"REC" and "►" (or "◄") appear, and the CD SYNCHRO indicator lights up.

To start recording on the side facing away from you, press TAPE ◄► until "REC►" changes to "◄REC".

8 Press DIRECTION repeatedly to select "⇄" to record on one side of the tape, or "↻" or "↻" to record on both sides.

9 Press TAPE II.

To	Do this
Stop recording	Press ■ (or TAPE ■ on the remote).
Cancel Program Edit	Press PLAY MODE/TUNING MODE repeatedly until "PGM" disappears from the display.

Timer recording radio programs

To timer record, you must first preset the radio station (see “Presetting radio stations” on page 33) and set the clock (see “Setting the clock” on page 11).

1 Tune in the preset radio station (see “Listening to the radio” on page 34).

2 Press CLOCK/TIMER SET on the remote.

3 Press + or – on the remote repeatedly to select “REC SET?”, then press ENTER/YES on the remote.

“ON” appears and the hour indication flashes.

4 Set the time to start recording.

Press + or – on the remote repeatedly to set the hour, then press ENTER/YES on the remote.

The minute indication flashes.

Press + or – on the remote repeatedly to set the minute, then press ENTER/YES on the remote.

5 Set the time to stop recording following the same procedure as step 4.

6 Load a recordable tape.

7 Press I/⏻ to turn off the system.

Other operations

To	Do this
Check the settings/ activate the timer	**1** Press CLOCK/TIMER SELECT on the remote. **2** Press + or – on the remote repeatedly until “REC SELECT?” appears, then press ENTER/YES on the remote.
Change the setting	Start over from step 1.
Cancel the timer	**1** Press CLOCK/TIMER SELECT on the remote. **2** Press + or – on the remote repeatedly until “TIMER OFF?” appears, then press ENTER/YES on the remote.

Notes

- You cannot activate the Daily Timer and recording timer at the same time.
- If you use the recording timer and the Sleep Timer at the same time, the Sleep Timer has priority.
- Do not operate the system from the time the system turns on until the recording starts (about 15 seconds before the preset time).
- If the system is on about 15 seconds before the preset time, the timer-recording will not be activated.
- The volume is reduced to minimum during recording.

Adjusting the sound

Generating a more dynamic sound (Dynamic Sound Generator)

Press DSG.

To cancel the DSG, press DSG again.

Adjusting the bass and treble

1 Press BASS/TREBLE on the remote repeatedly to select “BASS” or “TREBLE”.

2 While “BASS” or “TREBLE” appears, press + or – on the remote repeatedly to adjust the level.

Enjoying virtual surround sound

VES (Virtual Enhanced Surround) lets you enjoy surround sound effects by using sound imaging to create virtual rear speakers from the sound of the front speakers (L, R) without using actual rear speakers.

Use the remote for the operation.

1 Press DVD DISPLAY during playback.

The Control Menu appears

2 Press ↑ or ↓ repeatedly to select “VIRTUAL SURROUND”, then press → or ENTER.

The options for “VIRTUAL SURROUND” appear.

3 Press ↑ or ↓ repeatedly to select a surround effect.

For each item, see “Effects of each item”.

- VES TV
- VIRTUAL SEMI MULTI DIMENSION
- VES NIGHT
- VES A

4 Press ENTER.

To cancel

Select “OFF” in step 3.

To turn off the Control Menu

Press DVD DISPLAY repeatedly until the Control Menu is turned off.

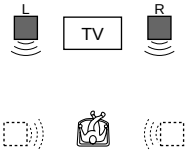
Tip

You can select the surround effect by pressing VES. Each time you press the button, the surround effect changes.

Effects of each item

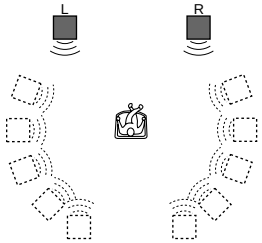
VES (Virtual Enhanced Surround) TV

Uses sound imaging to create virtual rear speakers from the sound of the front speakers (L, R) without using actual rear speakers (shown below). The sound imaging effect is distinct and clearly reproduces each aural element of the audio track. This mode is effective when the distance between the front L and R speakers is short, such as with built-in speakers on a stereo TV.



VIRTUAL SEMI MULTI DIMENSION

Uses sound imaging to create 5 sets of virtual rear speakers from the sound of the front speakers (L, R) without using actual rear speakers. The virtual speakers are reproduced as shown in the illustration below. This gives the sound an expanded effect that fills the area surrounding the listener.

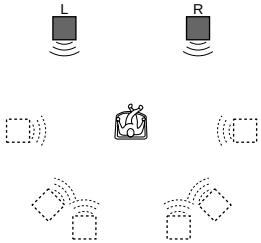


VES (Virtual Enhanced Surround) NIGHT

The large sounds, such as explosions, are compressed, but the quieter sounds are unaffected. This feature is useful when you don't want to disturb other people but still want to hear the dialog and enjoy the surround sound effects of VIRTUAL SEMI MULTI DIMENSION.

VES (Virtual Enhanced Surround) A

Uses sound imaging to create 3 sets of virtual rear speakers from the sound of the front speakers (L, R) without using actual rear speakers. The virtual speakers are reproduced as shown in the illustration below. Use this setting to enhance the sound quality.



L : Front speaker (left)
R : Front speaker (right)
⬚: Virtual speaker

continued

Enjoying virtual surround sound (continued)

Notes

- When you select an item, the sound cuts off for a moment.
- When the playing signal does not contain a signal for the rear speakers, the surround effects may be difficult to hear.
- Make sure that your listening position is between and at an equal distance from your speakers, and that the speakers are located in similar surroundings. Otherwise, the VES effect may be hard to discern.
- "VES NIGHT" only works with Dolby Digital discs. However, not all discs will respond to the "VES NIGHT" in the same way.
- If you use the DIGITAL OUT jack, sound will come from your speakers but it will not have the VES effect.

Turning off the display

— Power Saving Mode

Even if the system is off, the system consumes power to display the clock and to stay responsive to commands from the remote. Power saving mode reduces the amount of power consumed during standby.

In this mode, the clock is not displayed.

Press DISPLAY on the remote repeatedly while the system is off until the clock display disappears.

To cancel Power Saving Mode

Press DISPLAY while the system is off. Each time you press the button, the display switches as follows:

Clock display ⟷ No display (Power Saving Mode)

Tip

The timer continues to operate in Power Saving Mode.

Using the display

Checking the remaining time/ titles (DVD/VIDEO CD/CD)

When a CD TEXT disc is loaded, you can check the information stored on the disc, such as the titles. When the unit detects CD TEXT discs, the "TEXT" indication appears in the display.

Press DISPLAY on the remote during playback.

Each time you press the button, the display changes cyclically as follows:

■ **When playing a DVD**

Current title number and the playing time → Current title number and the remaining time → Current chapter number and the playing time → Current chapter number and the remaining time → Clock display → BASS level → TREBLE level

■ **When playing a VIDEO CD/CD**

Current track number and the playing time*1 → Current track number and the remaining time*1 → Playing time of the current disc*2 → Remaining time of the disc*2 → Track title*3 → Clock display → BASS level → TREBLE level

Checking the total playing time/titles (DVD/VIDEO CD/CD)

Press DISPLAY on the remote in stop mode.

Each time you press the button, the display changes cyclically as follows:

Total number of tracks and the total playing time → Disc title*3 → Clock display → BASS level → TREBLE level

*1 When playing VIDEO CDs with PBC functions, only the scene number and the playing time are displayed.

*2 These are not displayed during Shuffle Play or Program Play.

*3 With CD TEXT discs only (certain characters cannot be displayed). Depending on the disc, some CD TEXT information may not appear.

To scroll a long text

Press SCROLL on the remote.

Tip

You can check the current track title during playback. If you press SCROLL on the remote, a track title appears scrolling in the display. Press SCROLL on the remote at any point to stop scrolling. Press SCROLL on the remote again to restart the scrolling.

Note

Dependeing on the DVD, the disc information may not be displayed.

Falling asleep to music

— Sleep Timer

You can set the system to turn off after a certain time, so that you can fall asleep to music.

Press SLEEP on the remote.

Each time you press the button, the minute display (the turn-off time) changes cyclically as follows:

SLEEP OFF → AUTO* → 90min → 80min → … → 10min

* The system automatically turns off in 100 minutes or after the current CD or tape finishes playing.

Other operations

To	Press
Check the remaining time**	SLEEP on the remote once.
Change the time to turn off	SLEEP on the remote to select the time you want.
Cancel the Sleep Timer Function	SLEEP on the remote repeatedly until “SLEEP OFF” appears.

** You cannot check the remaining time if you select “AUTO”.

Note

Do not set to “AUTO” during Synchro Recording on a tape.

Waking up to music

— Daily Timer

You can wake up to music at a preset time. Make sure you have set the clock (see “Setting the clock” on page 11).

1 Prepare the sound source you want to play.

- DVD/VIDEO CD/CD: Load a disc. To start from a specific track, make a programme (see “Creating your own program” on page 14).
- Tape: Load a tape.
- Radio: Tune in the preset radio station (see “Listening to the radio” on page 34).

2 Press VOLUME + or – (or VOL + or – on the remote) to adjust the volume.

3 Press CLOCK/TIMER SET on the remote to display “DAILY SET?”.

4 Press ENTER/YES on the remote.

“ON” appears and the hour indication flashes.

5 Set the time to start playing.

Press + or – on the remote repeatedly to set the hour, then press ENTER/YES on the remote.

The minute indication flashes.

Press + or – on the remote repeatedly to set the minute, then press ENTER/YES on the remote.

6 Set the time to stop playing following the same procedure as step 5.

7 Press + or – on the remote repeatedly until the desired sound source appears.

Each time you press the button, the indication changes cyclically as follows:

8 Press ENTER/YES on the remote.

The start time, the stop time, and the sound source appear in turn, before the original display returns.

9 Press I/⏻ to turn off the system.

Other operations

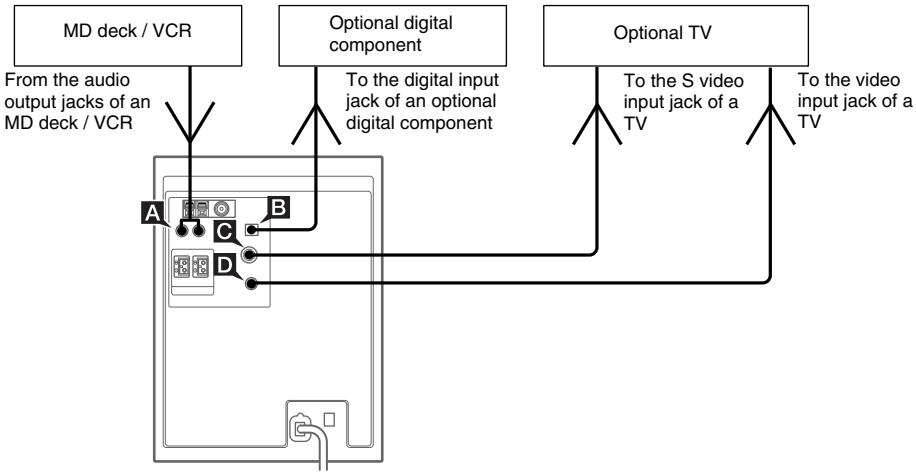
To	Do this
Check the settings/ activate the timer	**1** Press CLOCK/TIMER SELECT on the remote. **2** Press + or – on the remote repeatedly until “DAILY SELECT?” appears, then press ENTER/YES on the remote.
Change the setting	Start over from step 1.
Cancel the timer	**1** Press CLOCK/TIMER SELECT on the remote. **2** Press + or – on the remote repeatedly until “TIMER OFF?” appears, then press ENTER/YES on the remote.

Notes

- You cannot activate the Daily Timer and recording timer at the same time.
- If you use the Daily Timer and the Sleep timer at the same time, the Sleep Timer has priority.
- Do not operate the system from the time the system turns on until the play starts (about 15 seconds before the preset time).
- You cannot use the optional components connected to AUDIO IN MD (VIDEO) jacks as the sound source for Daily Timer.

Hooking up optional components

To enhance your system, you can connect optional components. Refer to the operating instructions provided with each component.


MD deck / VCR
Optional digital component
Optional TV
From the audio output jacks of an MD deck / VCR
To the digital input jack of an optional digital component
To the S video input jack of a TV
To the video input jack of a TV
A
B
C
D

A AUDIO IN MD (VIDEO) jacks

Use audio cords (not supplied) to connect an MD deck or VCR to these jacks. You can then listen to analog audio from the MD deck or VCR through this system.

B OPTICAL OUT jack

Use a digital optical cable (square, not supplied) to connect an amplifier, MD deck, or DAT deck with a digital optical input jack. You can then output the digital audio to the component from this system. If the jack is covered with a cap, remove it before use.

C S VIDEO OUT jack

Use an S video cable (not supplied) to connect an optional component (such as a TV) to this jack. You can then output the video to the component from this unit, and enjoy higher quality video images.

D VIDEO OUT jack

Use a video cable (supplied) to connect an optional component (such as a TV) to this jack. You can then output the video to the component from this unit, and enjoy the video images of DVDs, etc.

Listening to audio from a connected component

1 Connect the audio cords.

2 Press FUNCTION repeatedly until "MD" or "VIDEO" appears.

Start playing the connected component.

Tip

If you cannot select "VIDEO" by pressing FUNCTION repeatedly, turn off the system, then press I/⏻ while pressing FUNCTION. The function will change from "MD" to "VIDEO", and "VIDEO" will appear in the display. To change back to "MD", repeat this procedure.

Note

You cannot perform the above procedure during Power Saving Mode.

Enjoying the 5.1 channel sound with the optional amplifier

By connecting this unit to the optical input jack of the optional amplifier eqipped with Dolby Digital or DTS decoder, you can enjoy the 5.1 channel sound. Connect 6 speakers to the amplifier.

For the speaker placement, refer to the operating instructions supplied with the amplifier.

1 Connect the digital optical cable.

2 Press FUNCTION repeatedly until "DVD" appears.

Tip

It is recommended to use the surround effect such as 5.1 channel Dolby Digital or DTS sound through the amplifier. You cannot use the surround effect of this unit.

Note

When you enjoy the 5.1 channel sound through the optional amplifier, set the volume on this unit to minimum.

Recording on a connected component

1 Connect the digital optical cable.

2 Start recording.

Refer to the operating instructions provided with connected component.

Note

You can digitally record from the discs only. However, you cannot record from copy prohibited discs.

Problems and remedies

Should you encounter a problem with your system, do the following:

1 Make sure the power cord and speaker cords are correctly and firmly connected.

2 Find your problem in the troubleshooting checklist below and take the indicated corrective action.

If the problem persists after doing all of the above, consult your nearest Sony dealer.

General

"--:--" lights up in the display.

- A power interruption has occured. Set the clock (see page 11) and timer settings (see pages 39 and 44) again.

There is no sound.

- Press VOLUME + (or VOL + on the remote).
- Make sure the headphones are not connected.
- Check the speaker connections (see page 9).

Sound comes from one channel, or unbalanced left and right volume.

- Place the speakers as symmetrically as possible.
- Connect the supplied speakers.

There is severe hum or noise.

- Move the system away from the source of noise.
- Connect the system to a different mains.
- Install a noise filter (commercially available) to the mains line.

The timer cannot be set.

- Set the clock again (see page 11).

The timer does not function.

- Press CLOCK/TIMER SELECT on the remote to set the timer and light up "◴DAILY" or "◴REC" in the display (see pages 39 and 44).
- Check the timer setting and set the correct time (see pages 39 and 44).
- Cancel the Sleep Timer Function (see page 43).

The remote does not function.

- Remove the obstacle.
- Move the remote closer to the system.
- Point the remote at the system's sensor.
- Replace the batteries (R6/size AA).
- Locate the system away from the fluorescent light.

DVD/VIDEO CD/CD Player

The disc tray does not open and "LOCKED" appears on the front panel display.

- Contact your Sony dealer or local authorized Sony service facility.

The disc tray does not close.

- Place the disc correctly in the center of the tray.
- Always close the tray by pressing ⏏ DVD. Trying to press the tray closed with your fingers may cause problems with the player.

The disc does not eject.

- You cannot eject the disc during CD Synchro Recording. Press ■ to cancel the CD Synchro Recording, then press ⏏ DVD to eject the disc.
- Consult your nearest Sony dealer.

Play does not start.

- Open the disc tray and check whether a disc is loaded.
- Wipe the disc clean (see page 51).
- Replace the disc.
- Place the disc correctly in the center of the tray.
- Place the disc in the tray with the label side up.
- Remove the disc and wipe away the moisture on the disc, then leave the system turned on for a few hours until the moisture evaporates.
- Press DVD ► to start play.
- The region code on the DVD does not match the system.
- Cancel the Custom Parental Control function.

The sound skips.

- Wipe the disc clean (see page 51).
- Replace the disc.
- Try moving the system to a place without vibration (e.g., on top of a stable stand).
- Try moving the speakers away from the system, or placing them on separate stands.
  When you listen to a track with bass sounds at high volume, the speaker vibration may cause the sound to skip.

Play does not start from the first track.

- Press PLAY MODE/TUNING MODE repeatedly until both "PGM" and "SHUFFLE" disappear to return to normal play.
- Resume Play has been selected. When the playback is stopped, press ■, then start DVD playback (see page 16).
- The title, DVD, or PBC menu automatically appears on the TV screen. Follow the instructions on the TV screen.

continued

Picture

There is no sound.

- The DTS format is selected. Select other audio format such as Dolby Digital (see page 25).

Playback starts automatically.

- The DVD features an auto playback function. Refer to the operating instructions supplied with the disc.

Playback stops automatically.

- Some discs may contain an auto pause signal. While playing such a disc, the playback stops at the auto pause signal. Refer to the operating instructions supplied with the disc.

You cannot perform some functions such as Stop, Scan, Slow-motion Play, Repeat Play, Shuffle Play, or Program Play.

- Depending on the disc, you may not be able to do some of the operations described above. Refer to the operating instructions supplied with the disc.

Messages do not appear on the screen in the language you want.

- Select the language you want for the on-screen display in “OSD” under “LANGUAGE SETUP” in the Setup Display (see page 20).

The language for the sound track cannot be changed.

- Multilingual tracks are not recorded on the DVD being played.
- The DVD prohibits changing the language for the sound track. Refer to the operating instructions supplied with the disc.

The subtitle language cannot be changed.

- Multilingual subtitles are not recorded on the DVD being played.
- The DVD prohibits changing the subtitles. Refer to the operating instructions supplied with the disc.

The subtitle cannot be turned off.

- The DVD prohibits turning off subtitles. Refer to the operating instructions supplied with the disc.

The angles cannot be changed.

- Multi-angles are not recorded on the DVD being played. The angle can be changed only when the “ANGLE” indicator lights up on the front panel display (see page 28).
- The DVD prohibits changing the angles. Refer to the operating instructions supplied with the disc.

There is no picture.

- Press FUNCTION repeatedly to select “DVD”.
- Check that the system is connected securely.
- The video cable is damaged. Replace it with a new one.
- Make sure you connect the system to the video input jack of your TV (see page 10).
- Make sure you turn on the TV.
- Make sure you select the video input on the TV so that you can view the pictures from the system.

The picture noise appears.

- Clean the disc.
- If video from this system has to go through your VCR to get to your TV, the copy-protection applied to some DVD programs could affect picture quality. If you still experience problems after checking your connections, please try connecting this system directly to your TV’s S video-input, if your TV is equipped with this input (see page 45).
- Except for Pan American and European models, the color system is different. Set the color system to match your TV (see pages 22).

The aspect ratio of the screen cannot be changed even though you set “TV TYPE” in “SCREEN SETUP” in the Setup Display when you play a wide picture.

- The aspect ratio is fixed on your DVD.
- If you connect the system with the S-video cable, connect directly to the TV. Otherwise, you may not change the aspect ratio.
- Depending on the TV, you may not change the aspect ratio.

A 5-character service number is displayed on the screen and on the front panel display.

- The self-diagnosis function is activated. (See the table on page 50.)

Tape Deck

The tape does not record or play, or there is a decrease in sound level.

- The heads are dirty. Clean them.
- The record/playback heads are magnetised. Demagnetise them (see page 52).

The tape does not erase completely.

- The record/playback heads are magnetised. Demagnetise them (see page 52).

There is excessive wow or flutter, or the sound drops out.

- The capstans in the tape deck are dirty. Clean them using a cleaning cassette (see page 52).

Noise increases or the high frequencies are erased.

- The record/playback heads are magnetised. Demagnetise them (see page 52).

The tape does not record.

- No cassette is loaded. Load a cassette.
- The tab has been removed from the cassette. Cover the broken tab with adhesive tape (see page 52).
- The tape has wound to the end.

Optional components

There is no sound.

- Refer to General item “There is no sound.” on page 47 and check the condition of the system.
- Connect the component properly (see page 45) while checking:
  – if the cords are connected properly.
  – if the cord plugs are firmly inserted all the way.
- Turn on the connected component.
- Refer to the operating instructions supplied with the connected component and start playing.

The sound is distorted.

- Set the volume of the connected component lower.

The sound from the component connected to the AUDIO IN MD (VIDEO) jacks is distorted.

- If “VIDEO” appears when you press FUNCTION repeatedly, switch the function to “MD” (see the tip for “Listening to audio from a connected component” on page 46).

Tuner

Severe hum or noise/stations cannot be received.

- Set the proper band and frequency (see page 33).
- Connect the antenna properly (see page 9).
- Find a place and an orientation that provide good reception, then set up the antenna again. If you cannot obtain good reception, we recommend you connect a commercially available external antenna.
- The supplied FM lead antenna receives signals along its entire length, so make sure you extend it fully.
- Locate the antennas as far away from the speaker cords as possible.
- Consult your nearest Sony dealer if the supplied AM antenna has come off the plastic stand.
- Try turning off surrounding electrical equipments.

A stereo FM program cannot be received in stereo.

- Press REPEAT/FM MODE until “STEREO” appears in the display.

If the system still does not operate properly after performing the above measures, reset the system as follows:

1 Disconnect the mains lead.

2 Reconnect the mains lead.

3 Press I/⏻ to turn on the system.

4 Press I/⏻ while pressing ■ and ● REC.

The system is reset to the factory settings except for DVD settings. You should set the settings you made, such as the preset stations, clock, and timer.

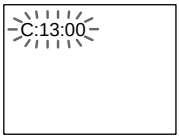
To reset the DVD settings, select “RESET” in step 3 of “Using the Setup Display” (page 19). After you select “RESET” and press ENTER, select “YES”, then press ENTER to reset the settings (it takes a few seconds to complete). Do not press I/⏻ when resetting the system.

continued

Self-diagnosis function

(When letters/numbers appear in the display)

When the self-diagnosis function is activated to prevent the system from malfunctioning, a five-character service number (e.g., C 13 00) with a combination of a letter and digits appears on the screen. In this case, check the following table.



First three characters of the service number	Cause and/or Corrective Action
C 13	The disc is dirty ➡ Clean the disc with a soft cloth (see page 51).
C 31	The disc is not inserted correctly. ➡ Re-insert the disc correctly.
E XX (XX is a number)	To prevent a malfunction, the system has performed the self-diagnosis function. ➡ Contact your nearest Sony dealer or local authorized Sony service facility and give the 5-character service number. Example: E 61 10

Precautions

On operating voltage

Before operating the system, check that the operating voltage of your system is identical with the voltage of your local power supply.

On safety

- The unit is not disconnected from the AC power source (mains) as long as it is connected to the wall outlet, even if the unit itself has been turned off.
- Unplug the system from the wall outlet (mains) if it is not to be used for an extended period of time. To disconnect the power cord (mains lead), pull it out by the plug. Never pull the cord itself.
- Should any solid object or liquid fall into the system, unplug the system and have it checked by qualified personnel before operating it any further.
- AC power cord must be changed only at the qualified service shop.

On placement

- Do not place the system in an inclined position.
- Do not place the system in locations where it is;
  - — Extremely hot or cold
  - — Dusty or dirty
  - — Very humid
  - — Subject to vibrations
  - — Subject to direct sunlight.
- Use caution when placing the unit or speakers on surfaces that have been specially treated (with wax, oil, polish, etc.) as staining or discoloraion of the surface may result.

On heat buildup

- Although the system heats up during operation, this is not a malfunction.
- Place the system in a location with adequate ventilation to prevent heat build-up in the system.

If you continuously use this system at a large volume, the cabinet temperature of the top, side and bottom rises considerably. To avoid burning yourself, do not touch the cabinet.

To prevent a malfunction, do not cover the ventilation hole for the cooling fan.

On operation

- If the system is brought directly from a cold to a warm location, or is placed in a very damp room, moisture may condense on the lens inside the DVD player. Should this occur, the system will not operate properly. Remove the disc and leave the system turned on for about an hour until the moisture evaporates.
- When you move the system, take out any disc.

If you have any questions or problems concerning your system, please consult your nearest Sony dealer.

Notes on discs

- Before playing, clean the disc with a cleaning cloth. Wipe the disc from the center out.
- Do not use solvents such as benzene, thinner, commercially available cleaners or anti-static spray intended for vinyl LPs.
- Do not expose the disc to direct sunlight or heat sources such as hot air ducts, nor leave it in a car parked in direct sunlight.
- Do not use discs encircled with a protection ring. This may cause a malfunction to the system.
- When using discs that have glue or similar tacky substance on the label side of the disc or that used a special ink when the label was printed, there is a chance that the disc or label may become attached to parts inside this unit. When this occurs, it may not be possible to remove the disc, and may also cause this unit to malfunction. Be sure to check that the label side of the disc is not sticky before using.

  The following types of disc should not be used:
  - — Rental or used discs with attached seals where the glue extends beyond the seal. The perimeter of the seal on the disc is tacky.
  - — Discs that have labels printed using a special ink that feels tacky when touched.
- Discs with non-standard shapes (e.g., heart, square, star) cannot be played on this unit. Attempting to do so may damage the unit. Do not use such discs.

Note on CD-R/CD-RW playback

Discs recorded on CD-R/CD-RW drives may not be played back because of scratches, dirt, recording condition or the drive's characteristics. Besides, the discs, which are not yet finalized at the end of recording, cannot be played back.

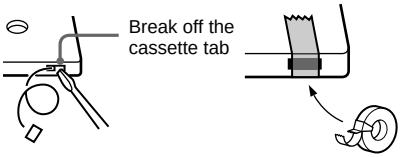
Cleaning the cabinet

Clean the cabinet, panel and controls with a soft cloth slightly moistened with mild detergent solution. Do not use any type of abrasive pad, scouring powder or solvent such as thinner, benzene or alcohol.

continued

To save a tape permanently

To prevent a tape from being accidentally recorded over, break off the cassette tab from side A or B as illustrated.



If you later want to reuse the tape for recording, cover the broken tab with adhesive tape.

Before placing a cassette in the tape deck

Take up any slack in the tape. Otherwise, the tape may get entangled in the parts of the tape deck and become damaged.

When using a tape longer than 90 minutes

The tape is very elastic. Do not change the tape operations such as play, stop, and fast-winding frequently. The tape may get entangled in the tape deck.

Cleaning the tape heads

Clean the tape heads after every 10 hours of use. Be sure to clean the tape heads before you start an important recording or after playing an old tape. Use a separately sold dry-type or wet-type cleaning cassette. For details, refer to the instructions of the cleaning cassette.

Demagnetising the tape heads

Demagnetise the tape heads and the metal parts that have contact with the tape after every 20 to 30 hours of use with a separately sold demagnetising cassette. For details, refer to the instructions of the demagnetising cassette.

In case color irregularity is observed on nearby a TV screen

With the magnetically shielded type of speaker system, the speakers can be installed near a TV set. However, color irregularity may still be observed on the TV screen depending on the type of your TV set.

If color irregularity is observed...

Turn off the TV set once, then turn it on after 15 to 30 minutes.

If color irregularity is observed again...

Place the speakers farther away from the TV set.

Messages

One of the following messages may appear or flash in the display during operation.

DVD

No Disc
There is no DVD in the player.

Push STOP!
You pressed PLAY MODE/TUNING MODE during play.

Cannot use
You pressed an invalid button.

CD

Cannot Edit
You tried to label a CD TEXT disc.

No Disc
There is no CD in the player.

OVER
You have reached the end of the CD while pressing ►► during play or pause.

Step Full!
You tried to program 26 or more tracks (steps).

TAPE

Cannot SYNC!
There is no tape in the tape deck, or the tab has been removed from the cassette.

No Tab
You cannot record the tape because the tab has been removed from the cassette.

No Tape
There is no tape in the tape deck.

Protect
Consult your nearest Sony dealer.

TUNER

WAIT
The function is switching to the tuner.

Specifications

Main Unit (HCD-M90)

Amplifier section

For the U.S. model
AUDIO POWER SPECIFICATIONS
POWER OUTPUT AND TOTAL HARMONIC DISTORTION:

With 6-ohm loads, both channels driven, from 70 - 20,000 Hz; rated 18 watts per channel minimum RMS power, with no more than 0.9% total harmonic distortion from 250 milliwatts to rated output.

North American model:
Continuous RMS power output (reference): 20 + 20 W (6 ohms at 1 kHz, 10% THD)
Total harmonic distortion less than 0.07% (6 ohms at 1 kHz, 12 W)

European model:
DIN power output (rated): 15 + 15 W (6 ohms at 1 kHz, DIN)
Continuous RMS power output (reference): 20 + 20 W (6 ohms at 1 kHz, 10% THD)
Music power output (reference): 40 + 40 W

Other models:
The following measured at 230 V AC, 60 Hz
DIN power output (rated): 15 + 15 W (6 ohms at 1 kHz, DIN)
Continuous RMS power output (reference): 18 + 18 W (6 ohms at 1 kHz, 10% THD)
The following measured at 220 V AC, 60 Hz
DIN power output (rated): 12 + 12 W (6 ohms at 1 kHz, DIN)
Continuous RMS power output (reference): 15 + 15 W (6 ohms at 1 kHz, 10% THD)

Inputs
AUDIO IN MD (VIDEO) (phono jacks): Sensitivity 500/250 mV, impedance 47 kilohms

Outputs
VIDEO OUT: (phono jack) max. output level 1 Vp-p, unbalanced, Sync negative, load impedance 75 ohms
S-VIDEO OUT: (4-pin/mini-DIN jack) Y: 1 Vp-p, unbalanced, Sync negative, C: 0.286Vp-p, load impedance 75 ohms
OPTICAL OUT: Optical Wavelength: 660 nm
PHONES: Accepts headphones with an impedance of 8 ohms or more
SPEAKER: accepts impedance of 6 to 16 ohms.

DVD player section

Laser: Semiconductor laser (DVD: λ=650 nm, CD: λ=780 nm) Emission duration: continuous
Frequency response: DVD (PCM 48 kHz): 2 Hz – 22 kHz = (±1 dB) CD: 2 Hz – 20 kHz = (±1 dB)
Signal-to-noise ratio: More than 90 dB
Dynamic range: More than 90 dB
Video color system format: NTSC, PAL

Tape deck section

Recording system: 4-track 2-channel stereo
Frequency response: 50 – 13,000 Hz (±3 dB), using Sony TYPE I cassettes
Wow and flutter: ±0.15% W. Peak (IEC) 0.1% W. RMS (NAB) ±0.2% W. Peak (DIN)

continued

Tuner section

FM stereo, FM/AM superheterodyne tuner

FM tuner section

Tuning range

North American model:	87.5 - 108.0 MHz (100-kHz step)
Other models:	87.5 - 108.0 MHz (50-kHz step)
Antenna	FM wire antenna
Antenna terminals	75 ohms unbalanced
Intermediate frequency	10.7 MHz

AM tuner section

Tuning range

Pan American model:	530 - 1,710 kHz (with the tuning interval set at 10 kHz) 531 - 1,710 kHz (with the tuning interval set at 9 kHz)
European model:	531 - 1,602 kHz (with the tuning interval set at 9 kHz)
Other models:	530 - 1,710 kHz (with the tuning interval set at 10 kHz) 531 - 1,602 kHz (with the tuning interval set at 9 kHz)
Antenna	AM loop antenna, external antenna terminal
Intermediate frequency	450 kHz

Speaker (SS-CM90)

Speaker system	2-way, bass-reflex type
Speaker units	
Woofer:	10 cm dia., cone type
Tweeter:	2.5 cm dia., balanced drive type
Nominal impedance	6 ohms

General

Power requirements

North American model:	120 V AC, 60 Hz
European model:	230 V AC, 50/60 Hz
Australian model:	230 V AC, 50/60 Hz
Other models:	110 – 120 V or 220 – 240 V AC, 50/60 Hz Adjustable with voltage selector

Power consumption

European model:	see the name plate 0.3 watts (at the Power Saving mode)
Other models:	see the name plate

Dimensions (w/h/d) incl. projecting parts and controls

Amplifier/Tuner/Tape/DVD section:	Approx. 159 × 217 × 335 mm
Speaker:	Approx. 140 × 217 × 226 mm

Mass

Amplifier/Tuner/Tape/DVD section:	Approx. 5.7 kg
Speakers:	Approx. 2.4 kg net per speaker
Supplied accessories	Remote (1) R6 (size AA) batteries (2) AM loop antenna (1) FM lead antenna (1) Video cable (1)

Design and specifications are subject to change without notice.

Glossary

Bit Rate

Value indicating the amount of video data compressed in a DVD per second. The unit is Mbps (Mega bit per second). 1 Mbps indicates that the data per second is 1,000,000 bits. The higher the bit rate is, the larger the amount of data. However, this does not always mean that you can get higher quality pictures.

Chapter

Sections of a picture or a music piece on a DVD that are smaller than titles. A title is composed of several chapters. Each chapter is assigned a chapter number enabling you to locate the chapter you want.

Dolby Digital

This sound format for movie theaters is more advanced than Dolby Pro Logic Surround. In this format, the rear speakers output stereo sound with an expanded frequency range and a subwoofer channel for deep bass is independently provided. This format is also called “5.1” because the subwoofer channel is counted as 0.1 channel (since it functions only when a deep bass effect is needed). All six channels in this format are recorded separately to realize superior channel separation. Furthermore, since all the signals are processed digitally, less signal degradation occurs.

Dolby Pro Logic Surround

As one method of decoding Dolby Surround, Dolby Pro Logic Surround produces four channels from two-channel sound. Compared with the former Dolby Surround system, Dolby Pro Logic Surround reproduces left-to-right panning more naturally and localizes sounds more precisely. To take full advantage of Dolby Pro Logic Surround, you should have one pair of rear speakers and a centre speaker. The rear speakers output monaural sound.

DTS

Digital audio compression technology that the Digital Theater Systems, Inc. developed. This technology conforms to 5.1-channel surround. The rear channel is stereo and there is discrete subwoofer channel in this format. DTS provides the same 5.1 discrete channels of high quality digital audio. The good channel separation is realized because the all channel data is recorded discrete and processed in digital.

DVD

A disc that contains up to 8 hours of moving pictures even though its diameter is the same as a CD.

The data capacity of a single-layer and single-sided DVD, at 4.7 GB (Giga Byte), is 7 times that of a CD. Furthermore, the data capacity of a dual-layer and single-sided DVD is 8.5 GB, a single-layer and double-sided DVD 9.4 GB, and a dual-layer and double-sided DVD 17 GB.

The picture data uses the MPEG 2 format, one of the worldwide standards of digital compression technology. The picture data is compressed to about 1/40 of its original size. The DVD also uses the variable rate coding technology that changes the data to be allocated according to the status of the picture.

The audio data is recorded in Dolby Digital as well as in PCM, allowing you to enjoy more real audio presence. Furthermore, various advanced functions such as the multi-angle, multilingual, and Parental Control functions are provided with the DVD.

Index (CD) / Video Index (VIDEO CD)

A number that divides a track into sections to easily locate the point you want on a VIDEO CD or a CD. Depending on the disc, no indexes may be recorded.

continued

Multi-angle function

Various angles, or viewpoints of the video camera, for a scene are recorded on some DVDs.

Multilingual function

Several languages for the sound or subtitles in a picture are recorded on some DVDs.

Parental Control

A function of the DVD to limit playback of the disc by the age of the users according to the limitation level in each country. The limitation varies from disc to disc; when it is activated, playback is completely prohibited, violent scenes are skipped or replaced with other scenes and so on.

Playback Control (PBC)

Signals encoded on VIDEO CDs (Version 2.0) to control playback. By using menu screens recorded on VIDEO CDs with PBC functions, you can enjoy playing simple interactive programs, programs with search functions, and so on.

Region Code

This system is used to protect copyrights. A region number is allocated on each DVD system or DVD disc according to the sales region. Each region code is shown on the system as well as on the disc packaging. The system can play the discs that match its region code. The system can also play discs with the "🌐" mark. Even when the region code is not shown on the DVD, the region limit may still be activated.

Scene

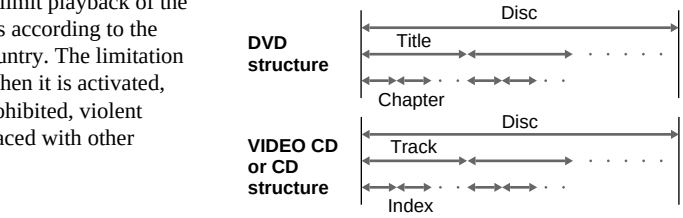
On a VIDEO CD with PBC functions (page 18), the menu screens, moving pictures, and still pictures are divided into sections called "scenes". Each scene is assigned a scene number enabling you to locate the scene you want.

Title

The longest sections of a picture or a music piece on a DVD; a movie, etc., for a picture piece on video software; or an album, etc., for a music piece on an audio software. Each title is assigned a title number enabling you to locate the title you want.

Track

Sections of a picture or a music piece on a CD or VIDEO CD. Each track is assigned a track number enabling you to locate the track you want.



Virtual Enhanced Surround (VES)

Technology from Sony developed to produce surround sound for home use using only the supplied front speakers. You can enjoy the surround effect using the sound imaging to create virtual rear speakers from the sound of the front speakers without using actual rear speakers.

VIDEO CD

A compact disc that contains moving pictures. The picture data uses the MPEG 1 format, one of the worldwide standards of digital compression technology. The picture data is compressed to about 1/140 of its original size. Consequently, a 12 cm VIDEO CD can contain up to 74 minutes of moving pictures.

VIDEO CDs also contain compact audio data. Sounds outside the range of human hearing are compressed while the sounds we can hear are not compressed. VIDEO CDs can hold 6 times the audio information of conventional audio CDs.

There are 2 versions of VIDEO CDs.

- Version 1.1: You can play only moving pictures and sounds.
- Version 2.0: You can play high-resolution still pictures and enjoy PBC functions.

This system conforms to both versions.

Language code list

For details, see pages 20, 25 and 28.
The language spellings conform to the ISO 639: 1988 (E/F) standard.

Code	Language	Code	Language	Code	Language	Code	Language
1027	Afar	1186	Scots Gaelic	1350	Malayalam	1513	Siswati
1028	Abkhazian	1194	Galician	1352	Mongolian	1514	Sesotho
1032	Afrikaans	1196	Guarani	1353	Moldavian	1515	Sundanese
1039	Amharic	1203	Gujarati	1356	Marathi	1516	Swedish
1044	Arabic	1209	Hausa	1357	Malay	1517	Swahili
1045	Assamese	1217	Hindi	1358	Maltese	1521	Tamil
1051	Aymara	1226	Croatian	1363	Burmese	1525	Telugu
1052	Azerbaijani	1229	Hungarian	1365	Nauru	1527	Tajik
1053	Bashkir	1233	Armenian	1369	Nepali	1528	Thai
1057	Byelorussian	1235	Interlingua	1376	Dutch	1529	Tigrinya
1059	Bulgarian	1239	Interlingue	1379	Norwegian	1531	Turkmen
1060	Bihari	1245	Inupiak	1393	Occitan	1532	Tagalog
1061	Bislama	1248	Indonesian	1403	(Afan) Oromo	1534	Setswana
1066	Bengali; Bangla	1253	Icelandic	1408	Oriya	1535	Tonga
1067	Tibetan	1254	Italian	1417	Punjabi	1538	Turkish
1070	Breton	1257	Hebrew	1428	Polish	1539	Tsonga
1079	Catalan	1261	Japanese	1435	Pashto; Pushto	1540	Tatar
1093	Corsican	1269	Yiddish	1436	Portuguese	1543	Twi
1097	Czech	1283	Javanese	1463	Quechua	1557	Ukrainian
1103	Welsh	1287	Georgian	1481	Rhaeto-Romance	1564	Urdu
1105	Danish	1297	Kazakh	1482	Kirundi	1572	Uzbek
1109	German	1298	Greenlandic	1483	Romanian	1581	Vietnamese
1130	Bhutani	1299	Cambodian	1489	Russian	1587	Volapük
1142	Greek	1300	Kannada	1491	Kinyarwanda	1613	Wolof
1144	English	1301	Korean	1495	Sanskrit	1632	Xhosa
1145	Esperanto	1305	Kashmiri	1498	Sindhi	1665	Yoruba
1149	Spanish	1307	Kurdish	1501	Sangho	1684	Chinese
1150	Estonian	1311	Kirghiz	1502	Serbo-Croatian	1697	Zulu
1151	Basque	1313	Latin	1503	Singhalese	1703	Not specified
1157	Persian	1326	Lingala	1505	Slovak		
1165	Finnish	1327	Laothian	1506	Slovenian		
1166	Fiji	1332	Lithuanian	1507	Samoan		
1171	Faroese	1334	Latvian; Lettish	1508	Shona		
1174	French	1345	Malagasy	1509	Somali		
1181	Frisian	1347	Maori	1511	Albanian		
1183	Irish	1349	Macedonian	1512	Serbian		

Control Menu Item List

Control Menu Items	Function
TITLE (DVD only) **SCENE** (VIDEO CD in PBC Playback only) **TRACK** (VIDEO CD only)	Selects the title (DVD), the scene (VIDEO CD in PBC Playback), or the track (VIDEO CD) to be played.
CHAPTER (DVD only) **INDEX** (VIDEO CD only)	Selects the chapter (DVD) or the index (VIDEO CD) to be played.
TRACK (CD only)	Selects the track to be played.
INDEX (CD only)	Selects the index to be played.
TIME	Checks the elapsed time and the remaining playback time. Input the time code for picture and music searching.
AUDIO	Changes the audio setting.
SUBTITLE (DVD only)	Displays the subtitles. Changes the subtitle language.
ANGLE (DVD only)	Changes the angle.
REPEAT	Plays the entire disc (all titles/all tracks) repeatedly or one title/chapter/track repeatedly.
VIRTUAL SURROUND	Uses 3D sound imaging to create virtual speakers to enjoy virtual surround sound.
ADVANCED (DVD only)	Checks the information (bit rate or layer) on the disc while playing a DVD.
CUSTOM PARENTAL CONTROL	Sets the disc to prohibit playback.
SETUP	CUSTOM Setup Adjusts the image and sound quality, Parental Control, and other various settings.
	RESET Returns the settings in “SETUP” to the default setting.

Tips

- Each time you press DVD DISPLAY, the Control Menu display changes cyclically as follows.
  Control Menu display → “ADVANCED” display (Appears if you select any setting other than “OFF”. See page 24.) → Control Menu display off
  The Control Menu items differ depending on the disc.
- The Control Menu icon indicator lights in green when you select any item except for “OFF” (“REPEAT” and “VIRTUAL SURROUND” only). The “ANGLE” indicator lights in green only when the angles can be changed.

Setup Display Item List

You can set the following items in the Setup Display.
The order of the displayed items may be different from the actual display.

LANGUAGE

- OSD — (Select the language you want to use from the displayed language list.)
- DVD MENU — (Select the language you want to use from the displayed language list.)
- AUDIO — (Select the language you want to use from the displayed language list. When you select ORIGINAL, you can enjoy the language given priority on the disc.)
- SUBTITLE — (Select the language you want to use from the displayed language list. When you select AUDIO FOLLOW, the setting is automatically switched to the language selected in AUDIO.)

SCREEN

- TV TYPE
  - 16:9
  - 4:3 LETTER BOX
  - 4:3 PAN SCAN
- SCREEN SAVER
  - ON
  - OFF
- BACKGROUND
  - JACKET PICTURE
  - GRAPHICS
  - BLUE
  - BLACK

CUSTOM

- COLOR SYSTEM*
  - AUTO
  - PAL
  - NTSC
- PAUSE MODE
  - AUTO
  - FRAME
- PARENTAL CONTROL
  - LEVEL
    - OFF
    - 8.
    - 7. NC17
    - 6. R
    - 5.
    - 4. PG13
    - 3. PG
    - 2.
    - 1. G
  - STANDARD
    - USA
    - OTHERS
  - CHANGE PASSWORD
- TRACK SELECTION
  - OFF
  - AUTO

* Except for Pan American and European models.

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